

CURRICULUM VITAE

HARRY KENNETH GENANT, MD

Department of Radiology, M392
University of California San Francisco
505 Parnassus Avenue
San Francisco, CA 94143-0628

Title: Professor of Radiology, Medicine, Epidemiology and Orthopaedic Surgery

Office Telephone: 415 476 4864

Office Fax: 415 476 8550

EDUCATION

<u>Institution & Location</u>	<u>Title or status</u>	<u>Major Subject</u>
US Air Force Academy, Colorado Springs, Colorado	----	----
University of Illinois, Urbana, Illinois	----	Pre-med
Northwestern University, BS, MD Chicago, Illinois	Medical School	
Johns Hopkins (Osler Medical Service), Baltimore, Maryland	Intern	Medicine
The University of Chicago, The University of Chicago, The University of Chicago,	Resident Resident Chief Resident	Medicine Radiology Radiology

LICENSES, BOARDS

National Board of Medical Examiners

American Board of Radiology

State License in California

PRINCIPAL POSITIONS HELD

1972-1973	University of Chicago	Clinical Instructor, Radiology
1973-1974	University of Chicago	Assistant Professor, Radiology
1974-1975	University of California San Francisco	Chief of Skeletal Radiology
1975-1979	University of California San Francisco	Assistant Professor, Radiology
1979-1998	University of California San Francisco	Chief of Skeletal Radiology
1981-present	University of California San Francisco	Associate Professor, Radiology
1988-present	University of California San Francisco	Chief of Skeletal Radiology
1988-present	University of California San Francisco	Professor, Radiology,
1989-1992	Shriner's Hospital for Crippled Children	Chief of Skeletal Radiology
		Professor of Radiology, Medicine and Orthopaedic Surgery
		Professor of Radiology, Epidemiology, Medicine, and Orthopaedic Surgery
		Executive Director, Osteoporosis and Arthritis Research Group
		Director, Department of Radiology

ANCILLARY POSITIONS HELD CONCURRENTLY

1976-present	Veterans Administration Medical Center, San Francisco	Consultant
1978-1994	Letterman General Medical Center, San Francisco	Consultant
1989-1991	Shriner's Hospital for Crippled Children	Consultant

HONORS AND AWARDS

- Phi Eta Sigma—Honorary
- Alpha Omega Alpha—Honorary
- President, Chief Resident's Society
- President's Guest Lecturer, American Academy of Orthopaedic Surgeons,
Honorary Lifetime Member
- Magna Cum Laude Award for a Scientific Exhibit: Computed Tomography of
the Lumbar Spine, The Radiological Society of North America
- Gold Medal Award for a Scientific Exhibit: Lumbosacral Spinal CT: Normal
Anatomy, Scanning Techniques, Normal Variants and Pathology, American
Roentgen Ray Society
- Cum Laude Certificate for a Scientific Exhibit: Lumbar pathology. XII
Symposium Neuroradiologicum and Annual Meeting of the American
Society of Neuroradiology
- President's Guest Lecturer, International Society for the of the Lumbar Spine,
Honorary Lifetime Member

- 1985 President, Association of University Radiologists
- 1986 The Walter Herbert Memorial Lecture, 29th Annual Postgraduate course, Diagnostic Radiology, UCSF.
- 1986 Herbert M. Stauffer Lecturer, Temple University, Philadelphia
- 1992 Keynote Speaker, First International Symposium on Osteoporosis & Metabolic Bone Diseases, May 7-11, 1992, Beijing, China
- 1991 Keynote Lecturer, Third Bath Conference on Osteoporosis and Bone Mineral Measurement, Bath, UK, June 23-26, 1992
- 1993 Member, Conjoint ACR-AUR SCARD Committee on Diagnostic Radiology Association of University Radiologists
- 1993 Invited lecturer: Fourth International Symposium on Osteoporosis, Hong Kong, March 27-April 2, 1993
- 1993 Chairman, Committee for Evaluation of Research Grants, International Skeletal Society
- 1994 Expert Panel on the Detection and Interpretation of Low Bone Mass in the Adult Population. The Society for Clinical Densitometry, March 5 & 6, 1994
- 1994 When Less is More. Low-dose drugs may save you unpleasant side effects-and money. US News and World Report, May 16, 1994
- 1994 Keynote Speaker: Perspectives on ultrasound: Technical and clinical. Fourth Bath Conference on Osteoporosis and Bone Mineral Measurement, Bath, UK, June 20-24, 1994.
- 1994 Keynote Speaker: Diagnostic imaging in chronic renal failure. 39th Annual meeting of the Japanese Society of Dialysis Therapy, Osaka, Japan, July 1-3, 1994.
- 1996 Secretary, International Skeletal Society
- 1996 Keynote Speaker: Session 7: Measurement-Advanced Methods Fifth Bath Conference on Osteoporosis and Bone and Mineral Measurement, Bath UK, June 24-26, 1996.
- 1997 Keynote address: Diverse diagnostic armamentarium in bone mass measures: opportunities and dilemmas. The 12th International Workshop on Bone Densitometry Workshop, Crieff, Scotland, May 18-22, 1997.
- 1997 Co-Chairman, Second International Conference on Osteoporosis on Osteoporosis, Osaka, Japan, November 13-16, 1997
- 1998 Keynote Speaker: Diagnostic application of bone densitometry: Expanding opportunities and emerging dilemmas. Sixth Bath Conference on Osteoporosis and Bone and Mineral Measurement, Bath UK, June 21-25, 1998.
- 1998 Honorary Member: Chilean Society of Osteology. Chile, August, 1998.
- 1998 Honorary Member: Hungarian Society of Osteology. Budapest, Hungary, September, 1998.

- 1998 Honorary Member, The European Society of Skeletal Radiology, Bled, Slovenia, October, 1998. (First Honorary Member from North America)
- 1998 Physician of the Year, International Society for Clinical Densitometry
- 1998 Chairman, World Health Organization Global Effort on Osteoporosis
- 1999 Chairman, Scientific Committee: Third International Conference on Osteoporosis, Xi'an, China March 28—April 2
- 1999 Honorary Fellow, The Royal College of Radiologists, London, May 28
- 2000 Honorary Member, Societa Italiana di Radiologia Medica, Milan June 10
- 2000 Invited Member, Asociacion Mexicana de Metabolismo Oseo y Mineral, A. C.
- 2000 Honorary Member, International Chinese Hard Tissue Society
- 2000 Chair, Musculoskeletal Workshop. European Congress of Radiology. Vienna Mar 5-10.
- 2000 Keynote lecture: MRI in osteoporosis in Session: Bone mass measurement. 7th Bath Conference. Apr 9-13. Bath, England
- 2000 Symposium Chair, Image Diagnosis in Rheumatic Diseases. 9th APLAR Congress of Rheumatology. May 21-26, Beijing
- 2000 Keynote Address: Microarchitectural assessment of bone. International Bone & Hormone Meeting, Australia & New Zealand Bone & Mineral Society 10th annual meeting. Nov 4-8. Hamilton Island, Australia
- 2000 Chair, Clinical Science Symposium: Imaging Update for Rheumatologists: MRI and Ultrasonography. 64th Annual Meeting American College of Rheumatologists, Oct 28-Nov 2, Philadelphia
- 2001 Elected member, Society of Skeletal Radiology
- 2002 Director, International Osteoporosis Foundation/European Society of Skeletal (IOF/ESSR) Initiative on Vertebral Fracture Assessment

PROFESSIONAL MEMBERSHIPS

American Academy of Orthopaedic Surgeons, 1979

Honorary Lifetime Member

American College of Radiology, 1977

American Rheumatism Association, 1984

American Roentgen Ray Society, 1977

American Society of Bone & Mineral Research, 1985

Asociacion Mexicana de Metabolismo Oseo y Mineral, A. C., 2000

Invited Member

Association of Osteobiology, 1997

Association of University Radiologists, 1977

Association of Women Radiologists, 1988

California Radiology Society, 1977

Chilean Society of Osteology 1998

Honorary Member

European Society of Skeletal Radiology, 1998

First Honorary Member from North America

Hungarian Osteoporosis and Osteoarthrology Society, 1997

Honorary Member

International Skeletal Society, 1977

Founding Member

International Society for Clinical Densitometry

International Society for the Study of the Lumbar Spine, 1983

International Chinese Hard Tissue Society, 2000

Honorary Member

Nu Sigma Nu Medical Fraternity, President

Osteoarthritis Research Society, 1996

Radiological Society of North America, 1977

Royal College of Radiologists, 1999

Honorary Fellow

San Francisco Radiologic Society, 1977

Societa Italiana di Radiologia Medica, 2000

Honorary Member

Society of Computed Body Tomography, 1982

Society of Nuclear Medicine, 1977

Society of Skeletal Radiology, 2001

Western Association of Physicians, 1984

PROFESSIONAL ACTIVITY

- 1971-72 Chairman American Association of Academic Chief Residents in Radiology
- 1975, 1978, 1987 Member, Special Study Section, National Institutes of Health
- 1978-80 National Academy of Sciences Member, Department of Energy Committee on Health Effects of Ionizing Radiation
- 1979 Chairman. First International Workshop on Bone and Soft Tissue Densitometry Using Computed Tomography, San Francisco
- 1979-81 National Academy of Sciences Member Federal Research on Biological and Health Effects of Ionizing Radiation Committee
- 1980-81 US Rheumatology, Delegate Chinese Medical Association, People's Republic China
- 1980-81 Consultant, Radiology Study Section Institute of Aging, National Institutes of Health
- 1981-82 Expert Witness, Endocrine and Metabolic Drug Advisory Committee. Food and Drug Administration
- 1981-82 XVth International Congress of Radiology, Brussels Co-chairman, Session on Rheumatic Diseases
- 1981-82 XVth International Congress of Radiology, Brussels Co-chairman, Session on Metabolic Bone Disease
- 1981-82 Member US Delegation to USSR for collaborative bone mineral studies
- 1982 -83 Invited Speaker, Consensus Development Conference on Total Joint Replacement, National Institutes of Health
- 1982-90 Co-Editor, Bone Syllabus III American College of Rheumatology
- 1983-84 Task Force Leader, Diagnostic Imaging American College of Rheumatology—National Institutes of Health
- 1983-84 Secretary-Treasurer, Association of University Radiologists
- 1984-85 Co-Editor, Bone Syllabus IV, American College of Rheumatology,
- 1984-85 President Elect, Association of University Radiologists
- 1984-85 Scientific Consultant, Institute for Metabolic Bone Disease, National Institutes of Health
- 1984 Chairman, Subcommittee on Standardization of Criteria. International League Against Rheumatism
- 1985-86 President, Association of University Radiologists
- 1985-86 Task Force Leader, Musculoskeletal Imaging, Workshop, National Institutes of Health
- 1985-present Conjoint Committee on Diagnostic Radiology American Society of Musculoskeletal Radiology

- 1985-present Scientific Advisory Board. National Osteoporosis Foundation
- 1987 Examiner Category I Bone and Joints American Board of Radiology, Inc
- 1987-present Co-Chairman, Steering Committee, Northern Chapter, National Osteoporosis Foundation
- 1988 American Board of Radiology, Inc
- 1989-present Scientific Advisory Board, Radiological Society of North America
- 1989-present Distinguished Scientific Advisors, Research & Education Fund, Radiological Society of North America
- 1990 Rheumatology Forum. Newer Imaging Techniques: Optical Approaches. Pfizer International, Vol 8(3), 1990.
- 1991 Member, International DXA Standardization Committee
- 1991-94 Membership Chairman, International Skeletal Society
- 1992 Keynote Lecturer Third Bath Conference Osteoporosis and Bone Mineral Measurement, Bath, UK
Keynote Speaker, and Chairman of Scientific Committees. First International Symposium on Osteoporosis & Metabolic Bone Diseases, Beijing
- 1993 Conjoint ACR-AUR-SCARD Committee on Diagnostic Radiology, Association of University Radiologists
Invited lecturer. Fourth International Symposium Osteoporosis, Hong Kong
Building bones beyond teen years. The Physician and Sports Medicine, Vol 21(1), January 1993, pp 15-16
- 1993-1996 Chairman, Committee for Evaluation of Research Grants, International Skeletal Society
- 1994 Keynote Speaker: Perspectives on ultrasound: Technical and clinical Fourth. Bath Conference on Osteoporosis and Bone Mineral Measurement, Bath, UK
OsteoSystems Advisory Board CompuMed Inc.
Member, International Expert Panel on the detection and interpretation of low bone mass in the adult population. Society for Clinical Densitometry. Chantilly, Virginia.
Keynote Speaker: Diagnostic imaging in chronic renal failure Japanese Society of Dialysis Therapy, Osaka, Japan, 39th Annual Meeting
- Panel on Prevention of Osteoporosis. Office of the Forum for Quality and Effectiveness in Health Care Clinical Practice Guideline
- Honorary Chairman. Osteoporosis Committee of China Gerontological Society
- Member, Expert Panel on the detection and interpretation of low bone mass in the adult population. Society Clinical Densitometry

- 1994 When Less is More. Low-dose drugs may save you unpleasant side effects—and money. US News and World Report, May 16, 1994
- 1996 Keynote Lecturer, Fifth Bath Conference on Osteoporosis and Bone and Mineral Measurement, Bath, UK
Board member, International Harmonization of Criteria of Osteoporosis Conference
Consultant Periprosthetic Bone Loss Consultants' Meeting. Merck
- 1996-present Secretary, International Skeletal Society
- 1997 Scientific Advisory Board, Sunlight Ultrasound Technologies Ltd
- 1998 Keynote Lecturer: Diagnostic application of bone densitometry: expanding opportunities and emerging dilemmas. Sixth Bath Conference on Osteoporosis and Bone and Mineral Measurement, Bath, UK
Update on BMD Assessment. Ibandronate – The comprehensive bisphosphonate. Boehringer Mannheim Satellite Symposium, European Congress on Osteoporosis
Member, Board of Trustees. International Society for Clinical Densitometry
- 1998-01 Chairman, World Health Organization Task Force on Osteoporosis.
- 1999 Radiological Devices Panel Meeting. Speaker: A comparison of the common methods used for assessment of bone strength. Food and Drug Administration
Presentation: Assessment of Osteoporotic Vertebral Fractures in the PROOF Study. Osteoporosis Towards the Millennium: Miacalcic and the Bone Quality Concept. Novartis
Examiner for the degree of PhD. University of Sheffield
- 2000 Assessment of vertebral fractures. Internal Society for Clinical densitometry educational meeting. Feb 11-13. Tempe, Arizona.
The Osteoarthritis Initiative – A Public-Private Research Collaboration. Feb 28-29, NIH, Bethesda, MD
NETA Working Group, sponsored by Parke-Davis Women's Healthcare. March 10-11, Charleston, South Carolina.
LIPITOR Osteoporosis Advisory Meeting Parke-Davis. Mar 30-31. New York
Measurement of BMD - how different methods perform in a clinical setting (lecture). Forum for Bone and Mineral Research, sponsored by Merck. Apr 1, Oslo, Norway.
Parke-Davis Oral Calcitonin Global Advisory Board meeting participant Apr 14-16. Amsterdam.
Merck Consultants Meeting. Apr 27. Short Hills, New Jersey
International Consensus Conference on Outcome Measures in Rheumatology (OMERACT), May 5-8, Toulouse, France

- 2000 International Scientific Advisory Panel, International Society for Clinical Densitometry, May 8-13, Rio de Janeiro
Wyeth-Ayerst Research Advisory Committee Phase 3 TSE-424 (consultant). Jun 26 Chicago
BONES Steering Committee Meeting Parke-Davis. Jul 16-17. Dallas, Texas.
rh-BMP-2 Investigators Meeting. Wyeth-Ayerst Pharmaceuticals. Aug 25-27, Chicago
Pfizer Women's Health Academic Forum, Aug 11-13, New York
Panel participant, Special Focus Day at 14th International Bone Densitometry Workshop Sep 3-8. Warnemünde, Germany
Interpretation of the impact of anti-rheumatic therapies on radiographic progression of rheumatoid arthritis. NIH/NIAMS Dec 3-5. Bethesda, Maryland.
Grant Reviewer, Medical Research Council Clinical Training and Career Development Panel, London.
- 2001 Member, Expert Panel, "The Disease Modifying Properties of Hyalgan" Sanofi-Synthelabo Inc. Feb 28. San Francisco.
The Role of Bone in the Treatment of Osteoarthritis: Future Directions in Structure Modifying Therapy. Osteoarthritis Thought Leaders Meeting. Proctor & Gamble Pharmaceuticals. Feb 10-11. Coral Gables, Florida
TSE-424 Advisory Committee Meeting. Wyeth-Ayerst Research. Apr 4. Philadelphia.
Member, Scientific Advisory Board GE Lunar Corporation
Expert witness: FDA public advisory committee meeting of Gilead Sciences to present tenofovir disoproxil fumarate (Viread). Silver Spring, MD Oct 3, 2001.
Advisory Committee Meeting Kineret (anakinra) . Sponsored by Amgen. Gaithersburg, MD. Aug 16, 2001
Session Chair "Clinical Data". Meeting: Osteoporosis and Strontium Ranelate. Sponsored by Servier Research Jul 2001 Paris
Co-chair. Health-star Osteoporosis Medical Research Award Office (HOMA) Oct 20-21, 2001 Beijing
Member, International Committee. Health-star Osteoporosis Medical Research Award Office (HOMA) Oct 20-21, 2001 Beijing

SERVICE TO PROFESSIONAL PUBLICATIONS

<i>American J of Obstetrics & Gynecology</i>	Reviewer	1989-present
<i>American Journal of Roentgenology</i>	Reviewer	1977-present
<i>American Medical Association (JAMA)</i>	Reviewer	1985-present
<i>Arthritis and Rheumatism</i>	Reviewer	1980-present
<i>Bone</i>	Reviewer	1985-present
<i>Bone</i>	Editorial Board	2001-present
<i>Calcified Tissue International</i>	Reviewer	1986-present
<i>Calcified Tissue International</i>	Editorial Board	1986-present
<i>Chinese Journal of Osteoporosis</i>	Editor in Chief	2000-present
<i>Clinical Ortho & Related Research</i>	Reviewer	1986-present
<i>Current Orthopaedics</i>	Advisory Board	1985-present
<i>Gastroenterology</i>	Reviewer	1985-present
<i>Investigative Radiology</i>	Reviewer	1977-present
<i>Investigative Radiology</i>	Reviewer	1984-present
<i>Journal of Bone and Mineral Research</i>	Editorial Board	1995-present
<i>Journal of Bone and Mineral Research</i>	Reviewer	1986-present
<i>Journal of Clinical Densitometry</i>	Editorial Board	1997-present
<i>Journal of Clinical Investigation</i>	Reviewer	1986-present
<i>Journal of Computer Assisted Tomography</i>	Reviewer	1981-present
<i>Journal of Orthopaedic Research</i>	Reviewer	1982-present
<i>Journal of Spine Disorders</i>	Editorial Board	1987-present
<i>New England Journal of Medicine</i>	Reviewer	1984-present
<i>New York State Journal of Medicine</i>	Reviewer	1985-present
<i>Orthopaedic Clinics of North America</i>	Guest Editor	1984-1985
<i>Orthopaedics</i>	Reviewer	1982-present
<i>Osteologiai Közlemények</i>	International Advisory Board	1996-present
<i>Osteoporosis International</i>	Editorial Board	1990-present
<i>Osteoporosis Today</i>	Editorial Board	2001-present
<i>Radiology</i>	Reviewer	1976-present
<i>Skeletal Radiology</i>	Editorial Board	1984-present
<i>Skeletal Radiology</i>	Reviewer	1978-present
<i>Spine</i>	Associate Editor	
<i>Western Journal of Medicine</i>	Reviewer	1980-present

TEACHING***INSIDE UCSF***

Residents & Fellows:

Medicine
Orthopedics
Rheumatology

Visiting Fellows:

Noon Conference

Post-doc Visiting Fellowship Lectures

HOURS

Radiology	4 hours/week	10
1 hour/week	15	
2 hours/week	25	
2 hours/month	2	12

Radiology	6 hours/month	15
1 hour/month		
1 hour/month		

OUTSIDE UCSF

Residents:

San Francisco Magnetic Resonance Imaging Center	8 hours/month	10
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SUMMARY OF TEACHING DUTIES

Total hours of teaching during past academic year: 800 hours

Total hours of teaching during current year: 800 hours

Total hours of teaching anticipated next year: 800 hours

Medical students and residents in Radiology and in other services are taught radiology largely through informal contact in consultations, ward rounds, seminars and demonstrations. Informal teaching occupies at least 30% of Dr Genant's time. Dr Genant spends an average of 1-2 hours per week working with radiologists in the community postgraduate courses, etc. All patient contact by the doctor is simultaneously a teaching demonstration.

UNIVERSITY SERVICE

1980-present Radiology Research Committee UCSF

1980-present Ad Hoc Promotions Committee

1986-present Institute for Health and Aging, faculty member

1986-present General Clinical Research Center Advisory Committee

SIGNIFICANT RECENT PUBLICATIONS

- 2003 Lu Y, Genant HK, Shepherd J, Zhao S, Mathur A, Fuerst TP, Cummings SR. Classification of osteoporosis based on bone mineral densities. *J Bone Miner Res* 16(5):901-011, 2001
- 2004 Genant HK, Cooper C, Poor G, Reid I, Ehrlich G, Kanis J, Nordin BE, Barrett-Connor E, Black D, Bonjour JP, Dawson-Hughes B, Delmas PD, Dequeker J, Ragi Eis S, Gennari C, Johnell O, Johnston CC Jr, Lau EM, Liberman UA, Lindsay R, Martin TJ, Masri B, Mautalen CA, Meunier PJ, Khaltaev N, et al. Interim report and recommendations of the World Health Organization Task-Force for Osteoporosis. *Osteoporos Int* 10:259-64
- 2005 Grampp S, Genant HK, Mathur A, Lang P, Jergas M, Takada M, Gluer CC, Lu Y, Chavez M: Comparisons of noninvasive bone mineral measurements in assessing age-related loss, fracture discrimination, and diagnostic classification. *J Bone Miner Res* 1997 12:697-711.
- 2006 Genant HK, Jergas M, Palermo L, Nevitt M, San Valentin R, Black D, Cummings SR: Comparison of semiquantitative visual and quantitative morphometric assessment of prevalent and incident vertebral fractures in osteoporosis. *J Bone Miner Res* 11:984-996, 1996.
- 2007 Genant HK, Engelke K, Fuerst TP, Glüer CC, Grampp S, Harris ST, Jergas M, Lang T, Lu Y, Majumdar S, Mathur A, Takada M: Noninvasive assessment of bone mineral and structure: State of the Art. *J Bone Miner Res* 11:707-730, 1996.

Dr Genant has also been an editor or co-editor of more than 30 books; and author or co-author of more than 170 chapters or invited articles, nearly 500 articles in peer reviewed scientific and medical journals, and over 600 abstracts presented at national and international scientific and professional gatherings.

Research Focus

The primary focus of my research is the development and validation of noninvasive quantitative bone densitometry techniques, the application of these techniques in various clinical settings dealing with the primary and secondary prevention of osteoporosis, and the examination of the latest techniques in magnetic resonance for application to the musculoskeletal system.

The major trends in the field are the advancement of bone densitometry technology for the assessment of osteoporosis and bone micro-architecture and the advancement of magnetic resonance imaging (MRI) for orthopaedic and rheumatologic applications. The majority of studies are oriented toward these areas of clinical research.

SCIENTIFIC AND PROFESSIONAL MEETINGS AND WORKSHOPS ATTENDED

International

Asian Pacific League Against Rheumatism, Congress of Rheumatology, 2000
Asociación Mexicana de Metabolismo Oseo Mineral, 2000
Congreso Argentino de Osteoporosis and II Congreso de Enfermedades del Metabolismo Oseo y Mineral del Mercosur, 2000
Congreso Latinoamericano and Congreso Chileno de Osteología y Metabolismo Mineral 2001
Copenhagen International Symposium on Osteoporosis, 1984, 1987, 1989, 1990, 1992
European Congress of Radiology, 1994-2000
European Society of Skeletal Radiology, 1996, 1999
European Symposium on Calcified Tissues, 1981, 1983, 1986, 1987, 1993, 1997
First International Seminar on Osteoporosis, 2000
Henry Ford International Symposium on Bone Mineral, 1973, 1983, 1988, 1989, 1993
Hong Kong International Symposium on Osteoporosis, 1993
International Bone & Hormone Meeting, 2000
International Bone and Mineral Society, 2001
International Conference on Bone Morphology, 1973, 1988, 1995
International Congress of Radiology, 1973, 1981,
International Congress on the Menopause, 1987, 1990, 1994
International Consensus Conference on Outcome Measures in Rheumatology (OMERACT), 2000
International MRI Symposium 2001
International Skeletal Society, 1974-2001
International Society for Clinical Densitometry, 1997-2001
International Society for Magnetic Resonance in Medicine 1996
International Society for the Study of the Lumbar Spine, 1983
International Symposium on Pseudogout, 1975
International Workshop on Bone and Soft Tissue Densitometry Using CT, 1979-1999
National Congress of Radiology, Society Italiana di Radiologica Medica, 2000.
Radiology Today, Salzburg, Austria, 1982

National

American Academy of Orthopaedic Surgeons, 1974, 1979, 1982, 1985-1988, 1995, 1996, 2001
American College of Nuclear Medicine, 1986, 1987, 1988
American College of Rheumatology, 1996, 2000
American Roentgen Ray Society, 1979-1988, 1990, 1993, 1994, 1997
American Society of Bone and Mineral Research, 1982, 1983, 1985-1995, 1997-2001
Annual Winter Skeletal Symposium, University of Pennsylvania 1998-2001
Association of University Radiologists, 1974, 1976-1990, 1993, 1994
Challenge of the Lumbar Spine, 1985
Crested Butte Skeletal Symposium, 1996, 1997
Endocrine Society Annual Meeting, 1981, 1982, 1983, 1993
Los Angeles Radiological Society, 1986, 1988
New York Roentgen Ray, 1984
Oral Gold Therapy in Rheumatoid Arthritis: Auranofin Symposium and Workshops, 1982
Orthopaedic Research Society, 1997
Philadelphia Roentgen Ray, 1986

Radiology Society of North America, 1972-1997, 1999, 2000
Rheumatism Society Annual Meeting, 1973, 1984
Society of Computed Body Tomography, 1983, 1986, 1987, 1988, 1993, 1994, 1995
Society of Magnetic Resonance in Medicine, 1982, 1983, 1984, 1987, 1988, 1989, 1990, 1996
Steenbock Symposium on Osteoporosis, 1980, 1989
Sun Valley Skeletal Symposium, 1977-1993, 2000
Symposium of Photographic Scientists and Engineers, 1974, 1977
Telluride Skeletal Symposium, 1994, 1995
Western Orthopaedic Society, 1984, 1987

PRESENTATIONS AND INVITED LECTURES

- 1972** Primary hyperparathyroidism: The utility of conventional roentgenography, bone densitometry and fine detail radiography. 58th Scientific Assembly and Annual Meeting of The Radiological Society of North America, Chicago, Nov 26-31, 1972.
- 1973** Fine detail radiography: Theoretical and practical considerations. International Conference on Bone Morphology, Ottawa, Mar, 1973.
Skeletal demineralization in primary hyperparathyroidism. International Bone Mineral Conference, Chicago, Oct 12-13, 1973.
Protocol design for the American College of Radiology efficacy studies, XIII International Congress of Radiology, Madrid, Spain, Oct 1973.
Radiological techniques in the diagnosis of primary hyperparathyroidism. XIII International Congress of Radiology, Madrid, Spain, Oct 1973.
In vivo determination of skeletal uptake of bone seeking radiopharmaceuticals, 59th Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Nov 1973.
- 1974** Fine detail skeletal radiography. American Academy of Orthopaedic Surgeons, Dallas, Texas, Jan 1974.
Optical versus radiographic magnification for fine detail skeletal radiography, 22nd Annual Meeting of the Association of University of Radiologists, New York, May 8-11, 1974.
In vivo study of factors influencing skeletal uptake of bone seeking radionuclides, 21st Annual Meeting of the Society of Nuclear Medicine, San Diego, Jun 12, 1974.
Comparison of optical and radiographic magnification for fine detail skeletal radiography. Symposium of Photographic Scientists and Engineers, Washington, DC, Oct 1974.
A comprehensive analysis of reflex sympathetic dystrophy syndrome. 60th Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Nov 1974.
- Primary hyperparathyroidism. Current concepts and recent advances. San Francisco Radiological Society, San Francisco, Nov 1974.
- Primary hyperparathyroidism: Current trends in diagnosis. Radiology Grand Rounds, University of California San Francisco, Dec 1974.
- 1975** Fine detail radiography of the hand. Medical Resident Conference, University of California San Francisco, Feb 1975.
Skeletal demineralization in primary hyperparathyroidism, East Bay Radiological Society Meeting, San Francisco, Feb 1975.
Newer radiological techniques in the study of hyperparathyroidism, Veterans Administration Medical Center, Endocrine Division, San Francisco, Mar 1975.
Radiographic magnification in skeletal radiography, International Skeletal Society, London, England, Apr 26, 1975.

Radiologic assessment of arthritis of the hand. House Staff Monthly Luncheon, University of California San Francisco, Apr 1975.

Radiological aspects of arthritis of the central skeletal medical conference, University of California San Francisco, May 1975.

Radiology of arthritis and metabolic bone disorders. Medical Scientific Meeting, Kaiser Permanente Medical Group, Walnut Creek, CA. , Jun 1975.

Heavy particle radiography for mammography. National Cancer Institute, Washington, DC, Jul 1975.

High resolution radiographic techniques for detection of arthritis. Milwaukee County General Hospital, Milwaukee, Wisconsin, Jul-Aug 1975.

Optical and radiographic magnification in skeletal radiography. Imaging Conference, sponsored by the Institute for Graphic Communications. Carmel, California, Aug 3-5, 1975.

From a radiologist's viewpoint. Imaging Conference, Carmel, California, Aug 3-5, 1975.

Quantitative radiologic techniques. Department of Medicine, University of California San Francisco, Aug 15, 1975.

Radiological aspect of pseudogout. International Conference on Pseudogout, sponsored by the Krock Foundation and the Arthritis Foundation, San Francisco, Oct 1975.

Direct radiographic magnification for skeletal radiography: An assessment of image quality and clinical application 61st Assembly and Annual meeting of the Radiological Society of North America, Chicago, Dec 1975.

1976 Advances in skeletal radiography. Medical Grand Rounds, University of California San Francisco, CA. Jan 7, 1976.

Radiology of arthritis in the foot. Seminars of the California Podiatric Clinic, San Francisco, Jan 11, 1976.

Radiology in the diabetic foot. Seminars of the California Podiatric Clinic, San Francisco, Jan 13, 1976.

Clinical experiences with the RSI micro focus tube. Symposium sponsored by Pfizer and Radiological Sciences, Inc. , Jan 1976.

Quantification of bone mineral in patients with inflammatory bowel disease. International Symposium on Bone Mineral Measurements, New Orleans, Jan 26-29, 1976.

Quantitative bone mineral analysis using dual energy computed tomographic scanning. 24th Annual Meeting of the Association of University of Radiologists, Boston, May 5-8, 1976.

Mechanism of uptake of bone seeking agents. 3rd International Skeletal Society Meeting, Montreal, Sep 9-11, 1976.

Clinical impact of high resolution skeletal radiography. 3rd Annual International Skeletal Society Meeting, Montreal, Sep 9-11, 1976.

1977 Clinical impact of newer techniques Radiographic magnification and CT scanning of the skeleton. Snowbird Skeletal Radiology Conference, Salt Lake City, Utah, Jan 24, 1977.

Radiology of metabolic bone disease. California Podiatric Clinic, San Francisco, Jan 1977.

Some radiographic features of the rheumatic diseases. Providence Hospital, Annual Spring Seminar, Oakland, California, Apr 2, 1977.

Spondylitic disorders. Mt. Zion Hospital and Medical Center, San Francisco, Apr 19, 1977.

Chondrocalcinosis. South Peninsula Radiological Society, May 9, 1977.

Calcification in and around joints. East Bay Radiological Society, May 12, 1977.

X-ray review of rheumatic diseases. Highland General Hospital, Oakland, California, May 17, 1977.

Skeletal applications of computed tomography. Fourth International Skeletal Society, Amsterdam, Sep 3-7, 1977.

The orthopaedic applications of computerized tomographic scanning. Fourth Annual Refresher Course of the International Skeletal Society, Amsterdam, Sept 3-7, 1977.

Critical assessment of imaging parameters and clinical relevance for magnification of skeletal radiography. Application of Optical Instrumentation in Medicine VI. Sponsored by the Society of Photo-optical Instrumentation Engineers and the Society of Photographic Scientists and Engineers. Boston, Sep 25, 1977.

Direct radiographic magnification in skeletal radiology. Symposium on Micro focal spot magnification radiography. Sponsored by Washington State Radiologic Society, Seattle, Washington, Oct 3, 1977.

Radiographic diagnosis in rheumatic disease. Rheumatology Immunology Housestaff Conference, University of California, San Francisco, Oct 1977.

Consideration of the clinical impact of direct magnification and computed tomography in skeletal radiology. 63rd Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Nov 28-Dec 3, 1977.

Radiographic manifestation of rheumatoid diseases. Medical Housestaff Conference, University of California, San Francisco, Dec 13, 1977.

1978

Direct radiographic magnification in skeletal radiology. Symposium on micro-focal spot magnification radiography. Sponsored by University of Minnesota Medical School and Department of Radiology, Minneapolis, Minnesota, Feb 9, 1978.

Finer points of joint radiology. Northwestern Rheumatism Society Annual Meeting. Portland, Oregon, Apr 7-8, 1978.

Reflex sympathetic dystrophy. Fifth Annual Refresher Course of the International Skeletal Society, Boston, Sept 1-3, 1978.

CT of neoplasms of the musculoskeletal system. 5th Annual Refresher Course of the International Skeletal Society, Boston, Sep 1-3, 1978.

Radiological approach to arthritis. East Bay Radiological Society, US Naval Hospital, Oakland, California, Nov 8, 1978.

CT of the musculoskeletal system. Boston Orthopaedic Club, Boston, Dec 4, 1978.

- 1979** Calcification in and around joints and CT scanning of the musculoskeletal system. Sun Valley Course, Sun Valley, Idaho, Jan 21-16, 1979.
- Advances in orthopaedic diagnosis: The emergence of computed tomography. President's guest lecturer. Academy of Orthopaedic Surgeons 24th Annual Meeting, San Francisco, Feb 24, 1979.
- Reflex sympathetic dystrophy, computed tomography of the musculoskeletal system and radiography of osteopenia, Mallinckrodt Institute of Radiology, Caribbean Cruise, May 1-7, 1979.
- Recent advances in the radiographic, densitometric and scintigraphic evaluation of bone. Endocrine/Metabolism Division, University of California San Francisco, Jul 30-Aug 3, 1979.
- Reassessment of CT of the skeleton. 6th Annual Refresher Course of the International Skeletal Society Meeting, Munich, Germany, Aug 27-31, 1979.
- 1980** Arthritis of the hands and CT in the non neoplastic musculoskeletal disorders. Sun Valley Course, Sun Valley, Idaho, Jan 21-25, 1980.
- Osseous model computed tomography. Symposium on models and techniques in radiological research. Tucson, Arizona, Mar 29-30, 1980.
- Osteoporosis: Evaluation & Treatment, Endocrine Grand Rounds, Veterans Administration, San Francisco, Apr 10, 1980.
- Radiology of osteopenia and arthroplasties of the hip. Diagnostic Radiology Update, University of Pennsylvania, May 12-19, 1980.
- Advances in CT diagnosis of spinal diseases. Present Concepts in Diagnostic Radiology, Letterman Army Medical Center, San Francisco, May 28-30, 1980.
- Measurement of vertebral spondiosal density using computed tomography. 10th Steenbock Symposium on Osteoporosis, Madison, Wisconsin, Jun 8-12, 1980.
- Computed tomography in skeletal disorders and reflex sympathetic dystrophy. Bone Radiology Course, San Diego, Jun 16-19, 1980.
- Radiography of osteopenia. Medical Grand Rounds, Veterans Administration, San Francisco, Jul 15, 1980.
- Computed tomography of the spinal canal. 7th Annual Refresher Course of the International Skeletal Society Meeting, Mexico City, Aug 27-31, 1980.
- Lecture tour of China and Japan, Sep 7-Oct 3, 1980.
- CT for low back pain syndrome and quantitative spinal bone mineral. George Washington University, St. Louis, Missouri, Oct 13, 1980.
- Human metabolic research. St. Luke's Hospital, New York, Oct 31, 1980.
- Radiology of arthritis. Highland Hospital, Oakland, California, Nov 4, 1980.
- Advances in CT of the musculoskeletal system. A quarter century of progress a look to the future. The Hospital for Special Surgery, Annual Alumni Meeting, New York, Nov 12-14, 1980.

New diagnostic techniques. American Academy of Orthopaedic Surgeons. Joint replacement of the hip and knee. The Waldorf Astoria, New York, Nov 15-17, 1980.

Spinal mineral loss by quantitative computed tomography. Symposium on Osteoporosis, San Diego, Nov 21-13, 1980.

Abnormal bone densities. Fresno Radiology Grand Rounds, Fresno, California. Dec 3, 1980.

Computed tomography of the lumbar spine. Roseville Conference, Roseville, California Dec 11, 1980.

1981 The osteoporosis of aging. Medical Grand Rounds, Jan 14, 1981.

Radiology of osteoporosis and radiology of osteopenia. 4th Annual Sun Valley Course, Sun Valley, Idaho, Jan 18-23, 1981.

New X ray techniques. Recent Advances in Clinical Endocrinology Course, San Francisco, Feb 16-18, 1981.

CT of the lumbar spine. Fresno Radiology Grand Rounds, Fresno, California, Feb 18, 1981.

Determination of bone mineral loss in the axial and appendicular skeleton in oophorectomized women. 2nd International Workshop on Bone and Soft Tissue Densitometry Using CT, Zuoz, Switzerland, Apr 13-16, 1981.

Computed tomography of the spine and HLA B27, University of Vermont, May 6-8, 1981.

US Delegate to USSR, Ministry of Biomedical Problem (Space Biology), May 17-22, 1981.

Arthritis/Rheumatology Meeting, Boston, Jun 3-5, 1981.

CT for low back pain syndromes, and HLA B27 associated spondyloarthropathies. Metabolic Bone Disease Session, XVth International Congress of Radiology, Brussels, Belgium, Jun 22-27, 1981.

Advances in computed tomography of the musculoskeletal system. Maine Orthopaedic Review Course, Colby College, Waterville, Maine, Jul 13, 1981.

CT of the musculoskeletal system, CT of the lumbar spine and recent advances in computed tomography. Musculoskeletal and Orthopaedic Radiology Seminar, Colorado Springs, Aug 10-14, 1981.

Quantitative computed tomography for assessing metabolic bone diseases. XVth European Symposium on Calcified Tissues, Knokke, Belgium, Sep 14-18, 1981.

CT in the low back pain syndrome. 8th Annual Refresher Course of the International Skeletal Society, Madrid, Spain, Nov 25-27, 1981.

Assessment of metabolic bone disorders by quantitative computed tomography. Radiological Society of North America, Chicago, Nov 16-19, 1981.

The XIIth Meeting of the US/USSR Joint Working Group on Space Biology and Medicine, NASA Life Sciences, Washington, DC, Nov 19-21, 1981.

1982 Computed tomography of the musculoskeletal system. Greater Kansas City Radiologic Society Meeting, Kansas City, Missouri, Jan 13, 1981.

Quantitative computed tomography for assessing metabolic bone diseases. CT '81 Meeting, Salzburg, Austria, Jan 28-Feb 2, 1982.

Radiological evaluation in the preoperative assessment of total hip arthroplasty and the radiological evaluation of the failed total hip arthroplasty. NIH Consensus Development Conference on Total Hip Joint Replacement, Washington, DC, Mar 1-3, 1982.

Quantitative computed tomography for assessing metabolic bone diseases and computed tomography of the lumbar spine. Sierra Radiology Conference. Lake Tahoe, Nevada, Mar 2 5, 1982.

Osteopenia, Calcifications in and around joints. 5th Annual Skeletal Symposium, Sun Valley, Idaho, Mar 7-12, 1982.

Radiology of osteosclerosis, reflex sympathetic dystrophy and regional osteopenia and CT in the evaluation of osteoporosis and metabolic bone disease. Radiology of Bones and Joints Course, New York, Mar 20-Apr 2, 1982.

Computed tomography of the lumbar spine. Present Concepts in Diagnostic Radiology, Letterman Army Medical Center, San Francisco, May 25-28, 1982.

Quantitative computed tomography for bone mineral analysis. Radiology Today, 2nd Multinational Postgraduate Course, Salzburg, Austria, Jun 24-27, 1982.

Quantitative computed tomography, Stanford University, Stanford, California, Jul 29, 1982.

Methods of assessing radiographic change in rheumatoid arthritis. Oral Gold Therapy in Rheumatoid Arthritis: Auranofin Symposium and Workshops, San Francisco, Aug 3 4, 1982.

Nuclear magnetic resonance: Musculoskeletal applications. Chairman. 9th Annual Refresher Course of the International Skeletal Society Meeting, San Francisco, Sep 1 4, 1982.

CT scanning of the lumbar spine and screening for lumbar disc disease, High Resolution Scanning at Roseville Community Hospital, Roseville, CA. , Sept 9, 1982.

Keynote speaker, Computed tomography of the lumbar spine. American Academy of Orthopaedic Surgeons, Monterey, CA. , Sep 19 14, 1982.

Vertebral mineral determination by quantitative CT: Clinical feasibility and normative data. Organizing Committee of the Third International Workshop on Bone and Soft Tissue Densitometry Using CT, Banff, Canada, Oct 24-28, 1982.

Participant in the Osteoporosis Investigator's Conference. Hoffmann LaRoche, Inc. , Nutley, New Jersey, Nov 11-13, 1982.

Musculoskeletal CT with emphasis on lumbar spine and pelvis. Radiological Society of North America, Nov 28-Dec 3, 1982.

1983 Advanced radiologic assessment of osteoporosis. Medical Grand Rounds, University of California, San Francisco, Feb 2, 1983.

Diagnostic approaches in the rheumatic diseases: Advanced diagnostic radiologic imaging. American Rheumatism Association, 11th Western Regional Meeting, Monterey, California, Feb 10-11, 1983.

The lumbosacral spine, computed tomography: Technical considerations and low back pain syndrome, Metabolic, neoplastic and infectious disease: Osteopenia: Radiography and CT, and Special diagnostic modalities in Trauma: CT. Musculoskeletal Disease: New Diagnostic Concepts and Modalities, San Diego, Feb 14-18, 1983.

Musculoskeletal NMR. 6th Annual Skeletal Symposium. Sun Valley, Idaho, Feb 20-26, 1983.

CT of the lumbar spine. Society of Computed Body Tomography, San Diego, Feb 28-Mar 3, 1983.

Presidential guest speaker. Musculoskeletal NMR. International Society for the Study of the Lumbar Spine. Cambridge, England, Apr 5-9, 1983.

Guest consultant. QCT for vertebral mineral. XVth European Symposium on Calcified Tissues. Davos, Switzerland, Apr 11-14, 1983

CT in musculoskeletal trauma. 83rd Annual Meeting of the American Roentgen Ray Society, Atlanta, Georgia, Apr 17-22, 1983.

Quantitative computed tomography for vertebral mineral determination. Invited Speaker. Henry Ford Symposium on Clinical Disorders of Bone and Mineral Metabolism, Detroit, Michigan, May 9-13, 1983.

Invited speaker. Workshop on biomechanics and quantitation of the skeleton. American Society of Bone Mineral, San Antonio, Texas, Jun 5-7, 1983.

Visiting professor, lecturer. University of Vancouver, Canada, Jun 27-29, 1983.

Advanced radiologic assessment of osteoporosis. Children's Hospital Grand Rounds, San Francisco, Jul 19, 1983.

Invited speaker. NMR of the musculoskeletal system. The Society of Magnetic Resonance in Medicine. 3rd Annual Scientific Meeting, New York, Aug 13-17, 1983.

Invited speaker. Musculoskeletal NMR, QCT in osteoporosis. Western Washington Arthritis Foundation. Seattle, Washington, Sep 9, 1983.

Rheumatology Conference, Kaiser Permanente Medical Group, Sep 14, 1983.

Rheumatology Radiology Conference, Veterans Administration, San Francisco, Sep 14, 1983.

CT scanning with particular reference to lumbar spine, Symposium Update Bone and Joint Radiology, Glasgow, Scotland, Sep 29-30, 1983.

NMR of the musculoskeletal applications. 10th Annual Refresher Course of the International Skeletal Society, Geneva, Switzerland, Oct 3-7, 1983.

Quantitative bone mineral analysis. Stanford Noon Conference, Stanford, California, Oct 17, 1983.

CT scanning and osteoporosis. O'Connor Hospital, Medical Education Meeting, San Jose, California Oct 18, 1983.

Musculoskeletal CT and NMR with emphasis on the lumbar spine, Radiological Society of North America, Chicago, Nov 28-29, 1983.

- Endocrine Grand Rounds, University of California, San Francisco, Dec 7, 1983.
- 1984**
- Guest speaker. The Spine: Nuclear resonance and quantitative computed tomography. New York Roentgen Society, New York, Feb 27, 1984.
- Current status of magnetic resonance imaging in musculoskeletal system. Special Orthopaedic Surgery Rounds, New York Academy of Medicine, New York, Feb 28, 1984.
- NMR of the musculoskeletal system, 7th Annual Skeletal System, Sun Valley, Idaho, Mar 5-9, 1984.
- Computed body tomography with NMR correlation, American Roentgen Ray Society, Las Vegas, Apr 7-13, 1984.
- CT of the low back pain syndrome, Spring Conference, New York Roentgen Ray Society, New York, Apr 25-27, 1984.
- Magnetic resonance imaging of musculoskeletal system State of the art, Association of University Radiologists, Newport Beach, California, May 12, 1984.
- CT of the lumbar spine. Present Concepts in Diagnostic Radiology, Letterman Army Medical Center, San Francisco, May 23-25, 1984.
- Co Chairman. Comparison of methods for in vivo spinal bone mineral measurement and quantitative computed tomography for spinal mineral assessment: Current status. 4th International Workshop on Bone and Soft Tissue Densitometry Using CT, Fontevraud, France, May 28-Jun 1, 1984.
- Quantitative computed tomography for spinal mineral assessment and Comparison of methods for in vivo spinal bone mineral measurement. Symposium on Osteoporosis, Copenhagen, Denmark, May 3-8, 1984.
- Musculoskeletal NMR imaging. Society of Magnetic Resonance in Medicine, Third Annual Scientific Meeting, New York, Aug 13-17, 1984.
- CT in low back pain and NMR of the Spine. Rocky Mountain Radiological Society, Denver, Colorado., Aug 22-24, 1984.
- Advanced radiologic assessment of osteoporosis. 11th Annual Refresher Course of the International Skeletal Society, Philadelphia, Sep 12-15, 1984.
- Advances in CT of musculoskeletal system and NMR of the musculoskeletal system. Orthopedic Radiology: 1984, Boston, Oct 15-18, 1984.
- Magnetic resonance imaging of the musculoskeletal system. San Diego Radiological Society, San Diego, Nov 7, 1984.
- Optimal application of bone densitometric techniques in clinical trials of agents of the prevention and treatment of osteopenia. Ciba Geigy Osteoporosis Conference, Boston, Nov 15-16, 1984.
- Magnetic resonance imaging of the musculoskeletal system. Symposium on NMR in Biology and Medicine, Taipei, Republic of China, Dec 12-16, 1984.
- 1985**
- Nuclear magnetic resonance of the hip. The Hip Society, Thirteenth Open Meeting, Las Vegas, Nevada, January 23, 1985.

Magnetic resonance imaging: Principles and musculoskeletal application. American Academy of Orthopaedic Surgeons Symposium, Las Vegas, Nevada, January 25, 1985.

Workshop on the status of NMR imaging and biomedical NMR, Second Workshop on advances in NASA relevant, minimally invasive instrumentation, Columbia Lakes, Texas, January 28-29, 1985.

MRI of the musculoskeletal system. 8th Annual Skeletal Symposium, Sun Valley, Idaho, Feb 23-Mar 2, 1985.

Magnetic resonance imaging of the musculoskeletal system. American Roentgen Ray Society, Boston, Apr 22-26, 1985.

Radiologic assessment of osteoarthritis. San Francisco Bay Conference. Sandoz Research Institute, San Francisco, Apr 25-28, 1985.

Musculoskeletal Radiology. Directions in research in diagnostic imaging and nuclear medicine. The National Institutes of Health Research and Research Related Manpower Development Programs, Bethesda, Maryland, May 2-3, 1985.

1986 CT & MRI of low back pain and osteoporosis. The Ninth Annual Course of the Society of Computed Body Tomography, Hilton Head, South Carolina, Mar 17-21, 1986.

Magnetic resonance imaging of the spine. The 1986 Herbert M. Stauffer Lecturer, Temple University, Philadelphia, Apr 2, 1986.

Advanced assessment of osteoporosis utilizing CT and DPA and MRI in musculoskeletal disease. Philadelphia Roentgen Ray Society, Philadelphia, Apr 3, 1986.

Osteoporosis and quantitative computed tomography. The Los Angeles Radiological Society, Los Angeles, Apr 9, 1986.

Present status of bone mineral analysis, CT and nuclear imaging, American Roentgen Ray Society, Washington DC, Apr 13 18, 1986.

Noninvasive methods of evaluation of bone mass. Progres en Rhumatologie, Versailles, France, Apr 24-25, 1986.

National Cancer Institute Investigator's meeting, Bethesda, Maryland, May 12-14, 1986.

Didronel osteoporosis investigator's meeting. Colorado Springs, Colorado, May 15-16, 1986.

Assessment of osteoporosis. Present Concepts in Diagnostic Radiology, Letterman Army Medical Center, San Francisco, May 20-23, 1986.

Invited speaker: Advances in NMR and CT Imaging of the musculoskeletal system, Lund Workshop, Malmo, Sweden, Jun 9-10, 1986.

Invited speaker: Quantitative CT & MRI. 43rd Congress Scandinavian Orthopaedic Association, Trondheim, Norway, Jun 11-14, 1986.

Invited speaker: Quantitative CT and MRI, XIXth European Symposium on Calcified Tissues, Stockholm, Stockholm, Jun 15-19, 1986.

Measurement of bone mineral content in early postmenopausal and postmenopausal women: A comparison of methods. 8th Annual Meeting, Anaheim, California, Jun 21-24, 1986.

Invited speaker: Assessment of osteoporosis using quantitative CT. The 7th International American Orthopaedic Association, Chicago, Aug 17-22, 1986.

Current assessment of osteopenia, Thirteenth Annual Refresher Course of the International Skeletal Society meeting, Vancouver, Canada, Sep 10-13, 1986.

Bone mineral measurements central and peripheral. The Sea Change in Radiology, ACR 63rd Annual meeting, Baltimore, Maryland, Sep 12-17, 1986.

Comparison of dual photon absorptiometry and computerized tomography for bone mass assessment. Osteoporosis Seminar Seattle Center, Seattle, Washington, Oct 27, 1987.

Invited speaker: Value of supplement calcium intake and reduction of complication of estrogen replacement therapy. Workshop on Current Strategies in the Treatment of Osteoporosis, Nice, France, Oct 25-Nov 1, 1986.

Osteoporosis. Oregon Radiological Society, St. Vincent Hospital, Portland, Oregon, Nov 19, 1986.

Osteoporosis of the spine radiologic assessment. Radiological Society of America, Chicago, Nov 30, Dec 5, 1986.

1987 Invited speaker: Measurements of bone density and mass. Osteoporosis Workshop on Research Directions in Osteoporosis. National Institutes of Health and National Osteoporosis Foundation, Bethesda, Maryland, Feb 9-11, 1987.

MRI of the spine. 10th Annual Skeletal Symposium. Sun Valley, Idaho, Mar 9-13, 1987.

Association of University Radiologists. Charleston, North Carolina, Mar 22-27, 1987.

Osteoporosis. The Tenth Annual Course of the Society of Computed Body Tomography Body CT State of the Art, San Diego, Mar 30-Apr 3, 1987.

Guest speaker: MRI of the spine and musculoskeletal systems and current assessment of osteoporosis. Western Orthopaedic Association, Spring Meeting, Pebble Beach, California, Apr 2-5, 1987.

Invited speaker: Osteoporosis. Fifth International Congress on the Menopause, Sorrento, Italy, Apr 6-10, 1987.

Invited speaker: Osteoporosis: Evaluation using QCT and MRI imaging of the skeleton and joints. Istituto di Radiologia, Trieste, Italy, Apr 9-10, 1987.

Assessment of Osteoporosis. Santa Maria Medical Center, Santa Maria, California, Apr 24, 1987.

Radiology of Osteoporosis. American Roentgen Ray Society, Miami, Florida, Apr 26-May 1, 1987.

Course director: Overview of quantitative computed tomography and Comparison of Techniques. Osteoporosis Update 1987, Hyatt Union Square, San Francisco, May 4-6, 1987.

Course director: Osteoporosis: Concepts and Controversies, Spine Update 1987, Hyatt Union Square, San Francisco, May 6-8, 1987.

MRI for orthopaedic Surgeons. Fresno Community Hospital and Medical Center, Fresno, California, May 14, 1987.

Rates of change in bone mineral content as measured by QCT, DPA, and SPA in postmenopausal women. The Ninth Annual American Society of Bone and Mineral Research, Indianapolis, Indiana, Jun 6-9, 1987.

Advanced assessment of osteoporosis. The Eighth Diagnostic Imaging meeting, Newport, Rhode Island, Aug 10-13, 1987.

Recent advances in hip imaging. The Hip Society, Summer Meeting, San Francisco, Sep 10-12, 1987.

Advanced Assessment of Osteoporosis: Current Developments. The Fourteenth Annual Refresher Course of the International Skeletal Society Meeting, Cannes, France, Sep 16-19, 1987.

Invited speaker: MRI of the postoperative spine: The Annual meeting Oxford '87, The Royal College of Radiologists, Oxford, England, Sep 24-26, 1987.

Normal women: Age and menopause related spinal trabecular bone mineral changes assessed by quantitative CT. The sixth International Workshop on Bone and Soft Tissue Densitometry, Buxton, England, Sep 22-25, 1987.

Cyclical treatment with Etidronate in treatment of osteoporosis. The International Symposium on Osteoporosis. Aalborg, Denmark, Sep 27-Oct 2, 1987.

Current concepts in the therapy of common arthritic conditions. Present Concepts in Internal Medicine Meeting, 4th US Army Regional Meeting, American College of Physicians, San Francisco, Oct 23-26, 1987.

Osteoporosis bone mass measurement. The Endocrine Society, Thirty Ninth Annual Postgraduate Assembly, San Francisco, Oct 24-27, 1987.

Osteoporosis: Current concepts and controversies. RSNA Refresher Course, Chicago, Nov 2-Dec 4, 1987.

Orthopaedic Surgery Update. Lifetime Medical Television, Hearst/ABC Viacom Entertainment Services, Los Angeles, Dec 17, 1987.

1988 Osteoporosis. Twenty sixth Annual Scientific Seminar, Brotman Medical Center, Beverly Hills, Jan 29, 1988.

New developments in bone densitometry. The Second Annual Symposium on the Long Term Effects of Estrogen Deprivation. St. Johns, US Virgin Islands, Feb 12-15, 1988.

Quantitative computed tomography. 14th Annual Meeting and Scientific Sessions of the American College of Nuclear Physicians, Scottsdale, Arizona, Feb 17-21, 1988.

MRI of joints, MRI of the postoperative spine. 11th Annual Skeletal Symposium, Sun Valley Idaho, Feb 29-Mar 4, 1988.

The effects of Etidronate disodium therapy in postmenopausal osteoporotic women: Preliminary results. Annual Association of University Radiologist meeting, 1988.

MRI of the musculoskeletal system. The Changing Practice of Medicine in an Age of High Technology, Merritt Peralta Health Education Center, Oakland, California, Apr 28-29, 1988.

Osteoporosis: pathogenesis, consequences, and bone mineral density. 88th Annual meeting of the American Roentgen Ray Society, San Francisco, May 8-13, 1988.

The appropriate usage of non invasive techniques for quantitating bone mass. Clinical Disorders of Bone and Mineral Metabolism, Detroit, Michigan, May 8-13, 1988.

Osteoporosis Current concepts. Present Concepts in Radiology Conference, Letterman Army Medical Center, San Francisco, May 31-Jun 3, 1988.

Quantitative bone mineral assessment in osteoporosis. The 5th International Congress on Bone Morphometry, Nigata, Japan, Jul 24-29, 1988.

MRI of the lumbar spine. Fifteenth Annual Refresher Course of the International Skeletal Society, Sydney, Australia, Sept 28-Oct 1, 1988.

Osteoporosis Update and MRI of the musculoskeletal system. The 1988 Workshop of the American Chiropractic College of Radiology, San Francisco, Oct 12-15, 1988.

Roentgen manifestations of osteopenia and quantitative computed tomography. Osteoporosis: Evaluation and Management, Harvard Medical School, Oct 28-30, 1988.

MRI of the musculoskeletal system. Kuzell Institute Symposium, San Francisco, Nov 11, 1988.

Quantitative bone mineral assessment in osteoporosis. The Japanese Society of Nuclear Medicine, Tokyo, Japan, Nov 16-18, 1988.

Osteoporosis: Current concepts and controversies. Refresher Course at the 74th Scientific Assembly and Annual meeting of the Radiological Society of North America, Chicago, Nov 27-Dec 2, 1988.

Osteoporosis: Current assessment. Swedish Medical Society. Stockholm, Sweden, Nov 30-Dec 2, 1988.

1989 Osteoporosis Current Concepts and Controversies (Part I & II). 41st Annual Midwinter Radiological Conference, Los Angeles, Jan 27-19, 1989.

Osteoporosis: Diagnosis and assessment, Osteoporosis: Prevention and Treatment, MRI of musculoskeletal tumors. 15th Annual Mid Pacific Radiological Conference, Kauai, Hawaii, Jan 31-Feb 4, 1989.

MRI imaging of the knee. Hawaii Radiological Society, Honolulu, Hawaii, Feb 4, 1989.

MRI of the spine and Osteoporosis: Diagnosis and Management. Twelfth Annual Skeletal Symposium, Sun Valley, Idaho, Feb 27-Mar 3, 1989.

QCT: Defining osteoporosis, fracture threshold and fracture risk. Asia Pacific Osteoporosis Conference, Honolulu, Hawaii, Mar 4-8, 1989.

Advances in Medical Imaging. 70th Annual Session of the American College of Physicians, San Francisco, Apr 13 -16, 1989.

The effects of ADFR coherence therapy with phosphorus and etidronate or cyclical therapy with etidronate alone in treatment of postmenopausal osteoporosis. European Society for Clinical Investigation, 23rd Annual Scientific Meeting, Athens, Greece, Apr 19-22, 1988.

Clinical results. Cyclical Etidronate A new dimension in therapy for osteoporosis. Paris Symposium, Paris, Apr 22, 1989.

Quantitative bone mineral assessment osteoporosis. 70th German Congress of Radiology, Bremen, Germany, May 3-6, 1989.

Quantitative computed tomography: Update 1989. 19th Steenbock Symposium on Osteoporosis, Madison, Wisconsin, Jun 4-7, 1989.

Osteoporosis: Current concepts and controversies. 17 Congres International de Radiologie, Paris, Jul 1-8, 1989.

Spine. The Society of Magnetic Resonance in Medicine, Eighth Annual Scientific meeting and Exhibition, Amsterdam, The Netherlands, Aug 12-18, 1989.

Advances in bone densitometry. ICCRH-ASBMR Joint meeting in Montreal, Quebec, Sep 9-14, 1989.

Appropriate use of densitometry. International Skeletal Society Meeting, New York, Sep 10-15, 1989.

Normal women: Age and menopause related spinal trabecular bone mineral changes assessed by quantitative computed tomography. 7th International Workshop on Bone and Soft Tissue Densitometry, Palm Springs, California, Sep 17-21, 1989.

Magnetic resonance imaging of the lumbar spine. Radiological Society of North America. Chicago, Nov 27-Dec 1, 1989.

1990 Osteoporosis: Modern assessment and magnetic resonance imaging of the musculoskeletal system. Institute of Clinical Medicine, Beijing, January 9-12, 1990.

Spine post op, musculoskeletal neoplasms, osteoporosis, arthritis. Imaging into the Nineties, Universiteit van Pretoria, National Radiology Congress CSIR Conference Centre, Pretoria, South Africa, Feb 8 -10, 1990.

Current methods of bone mass measurements. Research Advances in Osteoporosis, Crystal City, Arlington, Virginia, Feb 26-28, 1990.

Magnetic resonance imaging of the shoulder. Society of Magnetic Resonance Imaging. Washington, DC, Feb 26-28, 1990.

Advancing methods for noninvasive measurement of bone density and structure. Symposium on Research Advances in Osteoporosis. Sponsored by the NIH/NIAMS, Crystal City, Virginia, Feb 28, 1990.

MRI of the shoulder, MRI of the postoperative spine. 13th Annual Skeletal Symposium, Sun Valley, Idaho, Mar 5-9, 1990.

Evaluation of musculoskeletal neoplasms by MRI and CT and osteoporosis: Current assessment. Twelfth Annual Symposium on Metabolic Bone Disease and Bone Tumors, Haifa, Israel, Apr 3-5, 1990.

Assessing progression of articular disorders using conventional and newer Imaging techniques. VIth EULAR Symposium, Athens, Greece, May 16-19, 1990.

Advances in the technology and measurement of bone densitometry. Second Conference on Osteoporosis & Bone Mineral Measurement. Bath, United Kingdom, Jun 25-27, 1990.

Co Chairman. Ninth Annual Meeting of the Society of Magnetic Resonance in Medicine meeting, New York, Aug 18-24, 1990.

Osteoporosis: Advanced diagnostic assessment. Seventeenth Annual Skeletal Society meeting, Salzburg, Austria, Sep 12-15, 1990.

MRI of the failed back surgery and MRI of the shoulder. Magnetic resonance of the Musculoskeletal System, Bonn, Germany, Sep 28-19, 1990.

Bone mass measurement: Recent advances and future directions and Methodology for bone mass measurements. Third International Symposium on Osteoporosis and Consensus Development Conference, Copenhagen, Denmark, Oct 14-20, 1990.

Methodology for bone mass measurements. Sixth International Congress on the Menopause. Bangkok, Thailand, Oct 29-Nov 2, 1990.

Bone mass quantity and quality assessment: What are the comparable techniques, and how should they be utilized in 1990? Second Asian Symposium on Osteoporosis. Kuala Lumpur, Malaysia, Nov 4-10, 1990.

MR of the lumbar spine. Radiological Society of North America, Nov 25-30, 1990, Chicago.

MRI of failed back. Fall Symposium on Back Pain, San Francisco Marriott, San Francisco, Dec 6-9, 1990.

1991 Diagnosis of osteoporosis: Use of bone mass measurements, and its importance to therapeutic care. Osteoporosis Update, 1991, Seattle Airport Hilton, Seattle, Washington, Jan 10, 1991.

MRI of the shoulder, MRI of failed back and Osteoporosis assessment. Fourteenth Annual Skeletal Symposium, Sun Valley, Idaho, Feb 18-22, 1991.

CT versus MIR in osteonecrosis, neoplasm, and trauma. The Hip Society, Nineteenth Open Scientific Meeting, Anaheim, California Mar 10, 1991.

Diagnosis and assessment of osteoporosis. West Coast Faculty Forum on Estrogen Deprivation, PACE Inc, Pharmaceutical Advertising & Communications, Ritz Carlton Hotel, San Francisco, Apr 23, 1991.

Clinical and technical perspectives on bone densitometry. The 8th International Workshop on Bone Density. Bad Reichenhall, Germany, Apr 28 May 2, 1991.

Magnetic resonance imaging in the shoulder impingement syndrome. XIIth European Congress of Rheumatology, Budapest, Hungary, Jun 30-Jul 6, 1991.

Magnetic resonance imaging in bone marrow. Society of Magnetic Resonance in Medicine, 10th Annual Scientific Meeting, San Francisco, Aug 10-16, 1991.

Osteoporosis: Histology, quantitative assessment and current therapy. Eighteenth Annual Refresher Course, International Skeletal Society, San Diego, Sep 25-28, 1991.

Measure of bone mass in osteoporotic patients. Clinical management of osteoporosis: insights and perspectives, Sandoz Pharmaceuticals, Washington, DC, Sep 28, 1991.

Bone densitometry: Current status. International Conference on Osteoporosis, Kobe, Japan, Nov 5-7, 1991.

Quantitative computed tomography (QCT): Clinical considerations. Methodologies for Bone Mineral Assessment, Nara, Japan, Nov 8-9, 1991.

Osteoporosis: Current Assessment. 6th Asian Oceanian Congress of Radiology, New Delhi, India, Dec 14-18, 1991.

1992 Bone mineralometry, shoulder and osteoporosis. International meeting 11th CARVAT, New Perspectives in Diagnostic Imaging, Rome, Italy, Jan 20-24, 1992.

Osteoporosis Concurrent Session. The Christopher Columbus Medical Sciences Committee of the National Institutes of Health and the Subcommittee for the Conference on Aging. Washington, DC, Feb 10-12, 1992.

Osteoporosis: Current status, MRI of Bone Marrow & MRI of failed back. Fifteenth Annual Skeletal Symposium, Sun Valley, Idaho, Mar 2-6, 1992.

MRI of shoulder. Fifteenth Annual Course. Society of Computed Body Tomography and Magnetic Resonance, Westin La Paloma Resort, Tucson, Arizona, Mar 9-13, 1992.

The XIth International Conference on Calcium Regulating Hormone, Florence, Italy, Apr 24-29, 1992.

Bone densitometry: Recent advances. Keynote Speaker, The First International Symposium & Exhibition on Osteoporosis and Metabolic Bone Diseases, Beijing, May 8-11, 1992.

Chairman: Bone Mineral Measurement. Standardization of DEXA Measurements. Third Bath Conference on Osteoporosis and Bone Mineral Measurement, Bath, UK, Jun 23-26, 1992.

MRI of Bone Marrow: The International Skeletal Society Nineteenth Annual Refresher Course, Stockholm, Sweden, Aug 26-29, 1992.

Perspectives on bone densitometry: Past/Present/Future. Symposium on Recent Progress in the Study of Osteoporosis, Osaka, Japan, Oct 28-30, 1992.

Advanced imaging of the musculoskeletal system. The 7th UNPA memorial lecture. Seoul, Korea, Nov 20, 1992.

1993 Recent advances in osteoporosis assessment. Garmisch meeting, Munich, Germany, January 27-31, 1993.

Magnetic resonance imaging of the postoperative spine. American Academy of Orthopaedic Surgeons, Moscone Center, San Francisco, Feb 19, 1993.

MRI of hip, MRI of marrow disorders, MRI of post op spine. 16th Annual Skeletal Symposium Musculoskeletal MRI, Telluride, Colorado, Mar 8-12, 1993.

Quantitative magnetic resonance (QMR) in assessment of trabecular bone mineral density and structure A look into the future. Fourth International Symposium on Osteoporosis, Hong Kong, Mar 27-Apr 2, 1993.

Panel member for the Consensus Development Conference, Hong Kong, Apr 1-2, 1993.

- Methods of vertebral fracture assessment. XXIIIrd European Symposium on Calcified Tissues. Symposium Co-Director. Heidelberg, Germany, Apr 25-29, 1993.
- Musculoskeletal MRI. American Roentgen Ray Society, 9th Annual Meeting. Categorical course Director, San Francisco, Apr 25-30, 1993.
- Magnetic resonance imaging of the bone marrow. Clinical Disorders of Bone & Mineral Metabolism, 5th International Symposium, Detroit, Michigan, May 16-21, 1993.
- Recent advances in bone densitometry. The 75th Annual Meeting of the Endocrine Society, Las Vegas, Jun 9-12, 1993.
- Magnetization transfer contrast for articular cartilage, International Skeletal Society. Toronto, Canada, Aug 16-20, 1993
- Conjoint Committee on Diagnostic Radiology, The American Society of Musculoskeletal Radiology, RSNA, Nov 2-7 Dec 1, 1993.
- 1994**
- Bone densitometry: Current assessment; Magnetic resonance imaging of the postoperative lumbar spine; Magnetic resonance imaging of the bone marrow, 18th International Congress of Radiology, Singapore, January 23-28, 1994.
- Magnetic resonance imaging of the shoulder. The 5th Annual Vail: Clinical Magnetic Resonance Imaging symposium, Vail, Colorado, Feb 5-12, 1994.
- Shoulder MRI rotator cuff abnormalities and instability, MRI of arthritis. 17th Annual Skeletal Symposium Musculoskeletal MRI in Telluride, Colorado, Feb 28-Mar 4, 1994.
- Definition of a vertebral fracture. Osteoporosis Research Advances and Clinical Applications, National Osteoporosis Foundation, NIH of Arthritis, Musculoskeletal and Skin Diseases, NIH of Diabetes & Digestive and Kidney Diseases, NIH of Aging, NIH of Dental Research, Washington, DC, Mar 2-5, 1994.
- MRI of shoulder impingement Syndrome, 17th Annual Course Society of computed Body Tomography and Magnetic Resonance, Seattle, Washington, Apr 18-22, 1994.
- Bone imaging/Screening. International Osteoporosis Conference, Georgetown University Medical Center, Washington, DC, Jun 3, 1994.
- Keynote Speaker: Perspectives on ultrasound: Technical and clinical. Fourth Bath Conference on Osteoporosis and Bone Mineral Measurement, Bath, UK, Jun 20-24, 1994.
- Keynote Speaker: Diagnostic imaging in chronic renal failure. 39th Annual meeting of the Japanese Society of Dialysis Therapy, Osaka, Japan, Jul 1-3, 1994.
- Shoulder MR Rotator cuff abnormalities and instability, MRI in arthritis, MRI in post operative spine. First Summer Skeletal Symposium: Musculoskeletal MRI, Jackson Hole, Wyoming, Jul 3-8, 1994.
- Imaging of Bone and Joints (Chairman). Society of Magnetic Resonance, Second Meeting and Exhibition, San Francisco, Aug 6-12, 1994.
- Imaging Investigative Technique I (Moderator), MRI: Osteoporosis assessment: The International Skeletal Society, 21st Annual Refresher Course, Aug 17-20, 1994, Berlin, Germany.

Keynote Speaker: The Third National Symposium on Osteoporosis. Xi'an, China, Oct 10-15, 1994.

Progresses on bone mass measurements. International Symposium: Menopause and quality of life in the mature years. Rome, Italy, Oct 26-27, 1994.

Osteoporosis Update: Diagnostic methods, applications and Economics. 1994 Refresher Course, 80th Radiologic Society of North America Scientific Assembly and Annual Meeting, Nov 27-Dec 2, 1994.

1995 Quantitative QCT for osteoporosis. Garmisch '95: MRI into its Second Decade, Garmisch, Germany, January 25-29, 1995.

Second International Symposium on Paget's Disease of Bone, Sydney, Australia, Feb 9-10, 1995

Perth International Bone Meeting: Bone Fragility in the Year 2000: Clinical Measurement, 12th International Conference on Calcium Regulating Hormones, Melbourne, Feb 14-19, 1995.

Shoulder MRI, MRI of bone marrow disorders, MRI of postoperative spine. 18th Annual Winter Skeletal Symposium, Musculoskeletal MRI, Telluride, Colorado, Feb 27-Mar 3, 1995.

Current assessment of osteoporosis, quantitative ultrasound and quantitative magnetic resonance. European Congress of Radiology '95, Vienna, Austria, Mar 5-10, 1995

Degenerative cervical and lumbar spine: MRI, myelography and CT, Cervical and lumbar trauma. MRI, myelography and CT. What's the Best? American Academy of Orthopaedic Surgeons: Debating Complex Issues in Spine Surgery, San Francisco, Apr 5-8, 1995.

Bone marrow, Osteoporosis: Quantitative assessment, Imaging of the postoperative spine. Nicer Course in Musculoskeletal Radiology, Sandvika, Norway, May 29-Jun 1, 1995.

Tenidap versus naproxen in an open study of rheumatoid arthritis. XIIIth European Congress of Radiology, Amsterdam, The Netherlands, Jun 18-23, 1995.

Advanced Imaging of Arthritis. Meet the Expert (Pfizer). Amsterdam, The Netherlands, Jun 22, 1995.

Recent progress in assessment of bone quality. The 15th Annual Meeting of the Japanese Society of Bone Histomorphometry, Kurashiki, Japan, Jul 21-22, 1995.

European Society for Magnetic Resonance in Medicine and Biology. Society of Magnetic Resonance Third Scientific Meeting, Nice, France, Aug 19-25, 1995.

Osteoporosis/Treatment/Metabolic Bone Disease (Moderator). 17th Annual Meeting of the American Society for Bone and Mineral Research, Baltimore, Maryland, Sep 9-13, 1995.

DXA/Plenary lecture. 11th International Bone Densitometry Workshop, Glenden Beach, Oregon, Sep 24-28, 1995.

MRI of osteoporosis. The 22nd International Skeletal Society Meeting, New Orleans, Oct 18-21, 1995.

Keynote Lecturer: Opening Ceremony. The Second International Symposium on Osteoporosis, Beijing, Oct 11-16, 1995.

Measurement of axial bone mass by DXA. Bone Mass Measurement in Osteoporosis and Other Bone Diseases. Sponsored by the National Osteoporosis Foundation, Nov 9-11, 1995.

Refresher Course. Osteoporosis Update. 81st Annual Radiologic Society of North America Scientific Assembly and Annual Meeting, Nov 27-Dec 1, 1995.

1996 Bone micro-architecture. Second Annual Scientific meeting and DXA training certification course, Society for Clinical Densitometry. Colorado Springs, Colorado, January 17-21, 1996.

MR of bone marrow, MR of shoulder, Osteoporosis, quantitative assessment, Postoperative spine. Nicer Musculoskeletal Radiology Course, Kuala Lumpur, Malaysia, Feb 4-9, 1996.

Comparison of semiquantitative visual and quantitative morphometric assessment of prevalent and incident vertebral fractures in osteoporosis. Omeract 3 Conference. Cairns, Australia, Apr 14-20, 1996.

MRI of arthritis, MRI of shoulder. Pfizer APLAR Congress, Melbourne, Australia. Apr 21-26, 1996.

A picture is worth a thousand words: radiologic assessment. Keys to Disease Modification in Rheumatoid Arthritis. Satellite Symposium at the 8th APLAR Congress of Rheumatology, Melbourne, Australia, Apr 21, 1996,

Moderator: Introduction to MR arthrography: Current status and future directions. The Fourth Scientific Meeting of the International Society for Magnetic Resonance in Medicine, New York, Apr 29-May 2, 1996.

New developments in bone structure analysis. Boehringer Mannheim Satellite Symposium at the World Congress on Osteoporosis, Amsterdam, the Netherlands, May 18-23, 1996.

Invited lecture: What is the diagnostic armamentarium for osteoporosis? Consensus Development Conference, Amsterdam, the Netherlands, May 22-23, 1996.

MRI of arthritis, Bone marrow imaging and disorders, MRI of shoulder. Advanced Course in Musculoskeletal Radiology, Italian Association of Radiology and European Society of Musculoskeletal Radiology, Grand Hotel Terme, Margherita di Savoia, Italy, Jun 21-23, 1996.

Measurement—Clinical Applications; Measurement—Advanced Methods. 5th Bath Conference on Osteoporosis and Bone Mineral Measurement, Bath, United Kingdom, Jun 24-26, 1996

Opinion Leaders on Bone Densitometry Meeting. Merck and Washington University in St. Louis School of Medicine. Jackson Hole, Wyoming, Aug 2-3, 1996.

Radiographic diagnosis of osteoporosis and osteoarthritis. Deaconess Research Institute's Workshop on Osteoporosis: Interrelationship with Osteoarthritis. Billings, Montana, Aug 25-28, 1996.

Paget's Disease of Bone: Controversies and a New Approach to Treatment Debater. Meeting supported by Sanofi Winthrop and held at American Society for Bone and Mineral Research, Seattle, Washington, Sep 7, 1996.

Invited speaker: Interpretation of bone densitometry. Bone Disease for the Rheumatologist: Osteoporosis, New Management Strategies, and Beyond. Veterans Affairs Medical Center, University of Pennsylvania School of Medicine, Philadelphia, Sep 19-21, 1996.

Subjects with radiological evidence of osteoporosis. International League of Associations for Rheumatology / International Federation of Societies on Skeletal Diseases. Conference: Curso Internacional de Osteoporosis / Minimum Standards in Diagnosis and Treatment of Osteoporosis. Santiago, Chile, Sep 29-30, 1996.

Magnetic resonance imaging of the bone marrow. The Second Congress of the Polish Medical Society of Magnetic Resonance. Kraków, Poland, Oct 10-13, 1996.

Shoulder MR. MRI/CT Update, Harvard Medical School, Cambridge, Massachusetts, Oct 21-25, 1996

Chair of Scientific Session: Sports Medicine; Speaker: Bone marrow diseases. Third Annual Meeting of the European Society of Musculoskeletal Radiology (ESSR). Salzburg, Austria, Nov 8-9, 1996.

Chairman, RSNA Special Focus on Concepts and Controversies on Osteoporosis. Radiological Society of North America Annual Meeting, Chicago, Nov 1-5, 1996.

1997 Advanced MR & CT in osteoporosis, Osteoporosis: MR '97. The 7th International MRI Symposium, Garmisch, Germany, January 22-26, 1997.

Approaches to the diagnosis of osteoporosis. Osteoporosis: A Treatment Approach to Long Term Care Patients. The Annual Meeting of the American Medical Director's Association, Phoenix, Arizona, Feb 13, 1997.

Invited Presenter: Osteoporosis Update, MRI of the Spine, and MRI of Bone Marrow. Current Concepts in Neuro and Musculoskeletal Imaging, Department of Radiology, University of California School of Medicine, San Francisco, Kona, Hawaii, February, 16-21, 1997.

The First Signs of Osteoporosis. Improving Your Image. . the scientific way. UCSF Foundation and Donor Relations, University of California San Francisco, Laurel Heights Conference Center, Feb 27, 1997, San Francisco.

Invited Speaker: Bone Mass Evaluation. The Tenth European Congress of Radiology, European Radiology Association & Congress, Vienna, Austria, March 2-7, 1997.

Speech: Shoulder MRI- Rotator Cuff Abnormalities and Instability. The Twentieth Annual Winter Skeletal Symposium Musculoskeletal MRI, University of Pennsylvania Medical Center, Crested Butte, Colorado, March 10-14, 1997.

Chairman: Musculoskeletal Radiology. The Fortieth Annual Diagnostic Radiology Postgraduate Course, Department of Radiology, University of California, San Francisco, San Francisco, California, March 17-21, 1997.

Expert: Cartilage Protective Agent Meeting. Roche Products Ltd, London, England, April 22, 1997.

Conference for Principal Investigators of Raloxifene. Lilly Research Laboratories, Marina Del Rey, Los Angeles, California, April 11-13, 1997.

The X-Ray Criteria Meeting. Immunex Corporation, Pennsylvania, May 6, 1997.

Moderator: Musculoskeletal Trauma Session 28. American Roentgen Ray Society, May 4-7, 1997, Boston.

Keynote address: Diverse diagnostic armamentarium in bone mass measures: opportunities and dilemmas. The 12th International Workshop on Bone Densitometry Workshop, Crieff, Scotland, May 18-22, 1997.

Presenter: Bone Mass Measurement Techniques: Now and in the Future. Fourth International Symposium-Osteoporosis: Research Advances and Clinical Applications. The National Osteoporosis Foundation, Washington D. C. , June 4-7, 1997.

Invited Chairman: Diagnosis and screening of Osteoporosis. Presenter: Imaging of Secondary Osteoporosis. The International Federation of Societies on Skeletal Diseases, The XIXth ILAR Symposium in Singapore, June 11, 1997.

Computer Assisted Radiology 1997. The Eleventh International Symposium and Exhibition, Berlin, Germany, June 25-28, 1997.

Presenter: Neuro and Musculoskeletal MR Imaging Course. Department of Radiology, University of California, San Francisco, Aspen, Colorado, July 7-11, 1997.

Satellite pQCT User Meeting. International Sun Valley Workshop on Hard Tissue Biology, Sun Valley, Idaho, August 10-15, 1997.

FDA Panel Meeting. Hologic Incorporated, Washington D. C. , August 18, 1997.

The Seventh Summer Practicum of the Society of Computed Body Tomography and Magnetic Resonance. Society of Computed Body Tomography and Magnetic Resonance, Napa, California, August 17-21, 1997.

The Second Oxford International Symposium on the Costs and Benefits of Radiology. San Francisco, California, August 23, 1997.

Speech: Techniques of MRI of Articular Cartilage. The Twenty-Fourth Annual International Skeletal Society Refresher Course, Santa Fe, New Mexico, September 10-13, 1997.

The American Society for Bone and Mineral Research Annual Meeting. Procter & Gamble Pharmaceuticals, Cincinnati, Ohio, September 14, 1997.

The European Society For Magnetic Resonance in Medicine and Biology. Fourteenth Annual Meeting, Brussels, Belgium, September 18-21, 1997.

Summer Abdominal Imaging Conference-Spiral CT State of the Art Imaging. Department of Radiology, Stanford University School of Medicine, Jackson Hole, Wyoming, October 5-7, 1997.

Moderator: Clinical Magnetic Resonance Course. Department of Radiology, University of California, San Francisco, San Francisco, California, October 6-10, 1997.

Invited Chairman: Osteoporosis. Speech: Radiological Assessment. The Fourth Annual Meeting of the European Society of Musculoskeletal Radiology, Venice, Italy, October 10-11, 1997.

Invited Presenter: Osteoporosis. Skeletal Imaging: An Update, The Thirteenth Edition of CARVAT, Rome, Italy, October 12-15, 1997.

Advisory Board Member: The World Congress of Osteoporosis. Boehringer-Mannheim Advisory Board Meeting, Berlin, Germany, October 31- November 1, 1997.

Invited Speaker: Interpretation of bone densitometry . Bone

Speech: Semiquantitative scoring of high-resolution digital images versus conventional radiographs in patients with rheumatoid arthritis. The National Scientific Meeting of the American College of Rheumatology , Washington D. C. Convention Center, Washington D. C. , November 8-12, 1997.

Panel-member for the Consensus Development Conference, Osaka, Nov 13-16, 1997.

Panel Member RSNA/AAPM Symposium. Bone mass measurement: technology overview and application to the osteoporotic patient. 83rd Scientific Assembly and Annual Meeting, Radiological Society of North America, Nov 30-Dec 5, 1997 Chicago.

Panel Member. Imaging Symposium: Advances in Women's Imaging Panel. 83rd Scientific Assembly and Annual Meeting, Radiological Society of North America, Nov 30-Dec 5, 1997 Chicago.

Consultant: Alliance For Better Bone Health Advisory Conference. Dr. Nelson Watts and the Procter & Gamble/Hoechst Marion Roussel, Boca Raton, Florida, Dec 6, 1997.

1998

Speech: The Changing Landscape of Diagnostic Modalities. Fourth Annual Meeting, International Society for Clinical Densitometry, Jan 15-18, 1998, Orlando, Florida.

Panel Member: Current Concepts in Neuro and Musculoskeletal Imaging. Department Radiology. University of California, San Francisco, Kona, Hawaii, Feb 15-20. 1998.

Health Care Financing Administration Meeting. The American Medical Association, Washington D. C. , Feb 25, 1998.

Speech: Assessment of osteoporotic vertebral fractures in the PROOF study. Bone Integrity, Bone Quality and Bone Density: Towards a Relationship Consensus, Sintra, Portugal, Feb 28-Mar 1, 1998.

Presenter: Shoulder MRI-Instability, Fourth Day Case Review-Spine, MRI of the Post Operative Spine. The Twenty-First Annual Winter Skeletal Symposium, University of Pennsylvania Medical Center, Lake Louise, Alberta, Canada, Mar 9-13, 1998.

The Seventh Workshop on Cell Biology of Bone and Cartilage in Health and Disease. Davos, Switzerland, Mar 14, 1998.

Speech: MR of the Shoulder and Arthritis. The Second United Arab Emirates Radiology and Diagnostic Imaging Conference, Al Ain, United Arab Emirates, Mar 15-18, 1998.

Presenter: Principles of Bone Densitometry. The Sixty-Fifth Annual Meeting, The American Academy of Orthopaedic Surgeons, New Orleans, Louisiana, Mar 19-23, 1998

Panel Member: The Association of University Radiologists. Annual Meeting, New Orleans, Louisiana, Mar 25-29, 1998.

Advanced Radiology Life Support Course. The Twenty-First Annual Course, The Society of Computed Body Tomography and Magnetic Resonance, Rancho Mirage, California, Mar 30-Apr 3, 1998.

The Eleventh Asia Oceania Congress of Endocrinology. The Department of Nuclear Medicine, Asian Medical Center, Korea, Apr 12-16, 1998.

Panel Member and Project Director: Study of Osteoporotic Fractures. The 1998 Steering Committee Meeting, University of California Prevention Sciences Group, Palm Spring, California, Apr 17, 1998.

The International Society for Magnetic Resonance in Medicine. The Sixth Scientific Meeting and Exhibition, Sydney, Australia, Apr 18-24, 1998.

Panel Member: Diagnostic Imaging in Kona Postgraduate Course. Department of Radiology, University of California School of Medicine, San Francisco, Kona, Hawaii, Apr 19-24, 1998.

Moderator: Evaluating Osteoporosis in Women. The Ninety-Eighth Annual Meeting of the American Roentgen Ray Society, San Francisco, California, Apr 26-May 1, 1998.

Panel Member: Magnetic Resonance Imaging 1998. Speech: MR of the Shoulder. The Fifteenth Annual Magnetic Resonance Imaging National Symposium, Las Vegas, Nevada, May 4-8, 1998.

Presenter: Radiographic Diagnosis of Osteoporosis. The Northern Plains Osteoporosis Symposium, Sioux Falls, South Dakota, May 15-16, 1998.

Presenter: Diagnosing Osteoporosis: Current Assessment by Bone Densitometry. Solvay Pharmaceuticals, Chicago Estratab Meeting, Chicago, Illinois, Jun 12-14, 1998.

The Advanced Course in Musculoskeletal Radiology. Italy, Jun 18-20, 1998.

President: Bone Imaging and Measurements Workshop. Chairman: Radiographic Vertebral Fracture Assessment in Clinical Trials. Institut de Reserches Internacionales Servier, London, England, Jun 20-21, 1998.

The Seventh Pan-American Congress of Rheumatology. PANLAR 1998, Montreal, Quebec, Canada, Jun 21-25, 1998.

Presenter: Central Evaluations and the Radiographic Procedures for Vertebral and Clinical Fractures. The International Principal Investigators Committee Meeting-TOP Study, Bristol, Jun 22, 1998.

Presenter: Bone Mineral Measurement Methodology. The Sixth Bath Conference on Osteoporosis and Bone Mineral Measurement, National Osteoporosis Society, Bath United Kingdom, Jun 22-25, 1998.

Guest Speaker: What is the Best Diagnostic Tool. The Korea Health Council on Osteoporosis International Symposium on Bone, Seoul, Korea, Jun 25-28, 1998.

Global Investigator Meeting. Eli Lilly and Company, New York, New York, Jul 17-18, 1998.

Guest Speaker: Advanced assessment of osteoporosis. The Sixth Congress of the Chilean Society of Osteology and Mineral Metabolism, Santiago, Chile, Aug 7-8, 1998.

Panel Member and Speaker: MRI of the Post Operative Spine and MRI of Marrow Disorders. The Third Summer Skeletal Symposium Musculoskeletal MRI. Department of Radiology, University of Pennsylvania School of Medicine, Durango, Colorado, Aug 9-14, 1998.

Panel Member: The International Skeletal Society. The Twenty-Fifth Annual Refresher Course and meeting, Dublin, Ireland, Sep 5-8, 1998.

Consensus Conference on Clinical Guidelines for Diagnosis and Treatment of Osteoporosis. The European Congress on Osteoporosis, Berlin , Germany, Sep 11-15, 1998.

Guest Presenter: Practical Guidelines for Bone Mass Measurement. The First Central and Eastern European Osteoporosis Meeting, Hungarian Osteoporosis and Osteoarthrology Society, Budapest, Hungary, Sep 25-27, 1998.

Closing Commentator: The Thirteenth International Bone Densitometry Workshop. Lunar Norland/Stratec Hologic, Delavan, Wisconsin, Oct 4-8, 1998.

Presenter: Overview of Risedronate European and North American Clinical Studies. Physician's Update Meeting: Risedronate Vertebral Deformity Study Results. Vail, Colorado, Oct 24, 1998.

Guest Speaker: MRI of Synovitis. European Society of Musculoskeletal Radiology Fifth Annual Meeting. Bled, Slovenia, Oct 30-31, 1998.

Moderator: "Osteoarthritis: Methodology in Clinical Trials." National Meeting for the American College of Rheumatology. San Diego, California, Nov 8-12, 1998.

Presenter: Chronic Intermittent Cyclical Administration of Tiludronate in Postmenopausal Osteoporosis: Report of Two Multicenter Studies in 2316 Patients. Second Joint Meeting ASBMR-IBMS. San Francisco, California, Dec 1-6, 1998.

Advisory Attendee. FemHRT Advisory Meeting. New York, New York, Dec 9-10, 1998.

MRI of Synovitis. Fifth Annual Meeting, European Society of Musculoskeletal Radiology. Bled, Slovenia. Oct 30-31, 1998

Shoulder MRI-Instability; MRI in Arthritis; Case Review-Spine; MRI of the Post-Operative Spine. 21st annual Winter Skeletal Symposium: Musculoskeletal MRI. Lake Louise, Alberta, Canada. Mar 9-13, 1998.

MRI of the Shoulder; Advanced Radiologic Assessment of Osteoporosis; Emerging Applications of MRI in Arthritis. The Second United Arab Emirates Radiology and Diagnostic Imaging Conference. Al Ain, UAE. Mar 15-18, 1998.

MRI of the Shoulder. 15th Annual Magnetic Resonance Imaging 1998: National Symposium. Las Vegas, Nevada. May 3-8, 1998

Assessment of Osteoporotic Vertebral Fractures in the PROOF Study. Novartis Meeting, Sintra, Portugal.

Northern Plains Osteoporosis Symposium. Sioux Falls, South Dakota. May 15-16, 1998

Morphometric and/or Qualitative Vertebral Assessment to Define Incident Vertebral Fracture. Bone Imaging and Measurements Workshop. London. Jun 20-21, 1998

Non-Invasive Assessment of Bone Mineral and Structure: State of the Art; Diagnostic Applications of Bone Densitometry: Expanding Opportunities and Emerging Dilemmas. VI Congress of the Chilean Society of Osteology and Mineral Metabolism. Santiago, Chile. Aug 7-8, 1998.

Current Assessment of Osteoporosis. Korean Health Council on Osteoporosis: International Symposium. Seoul Jun 25-28, 1998.

Diagnostic Application of Bone Densitometry: Expanding Opportunities and Emerging Dilemmas. Sixth Bath Conference on Osteoporosis & Bone Mineral Measurement. Bath, England. Jun 22-26, 1998.

MRI of the Bone Marrow; MRI in Arthritis; MRI of the Postoperative Spine. Third Summer Skeletal Symposium: Musculoskeletal MRI. Durango, Colorado. Aug 9-14, 1998.

"SERMs in the long-term management of Postmenopausal Women" Co-chair of Eli Lilly Satellite Symposium at the ASBMR-IBMS San Francisco Dec 2, 1998

Advanced Imaging of Bone Macro and Micro Structure. Plenary lecture, ASBMR-IBMS San Francisco Dec 2, 1998

1999

Presenter: The Relative Clinical Utility of Central and Peripheral Measurements. The International Society for Clinical Densitometry, Fifth Annual Scientific Meeting. New Orleans, Louisiana, Jan, 14-17, 1999.

Presenter: MR and CT Microscopy in Osteoporosis. MR '99, 8th International MRI Symposium. Garmisch, Jan 27-31, 1999.

Moderator: Plenary Poster Session. Presenter: Osteoporosis-Diagnosis I: Methodology. 11th International Workshop on Calcified Tissues. Eilat, Israel. Feb 7-12, 1999.

Advanced Imaging of Bone Macro and Micro Structure. 11th International Workshop on Calcified Tissues. Eilat, Israel Feb 7-12, 1999

MRI of the Post Op Spine; MRI of the Shoulder. 22nd Annual Winter Skeletal Symposium Musculoskeletal MRI, University of Pennsylvania Medical Center. Lake Louise, Alberta. Mar 22-26, 1999

Participating Faculty, Moderator and Presenter: Fourth Day Case Review - Spine, MRI of the Post-Spine, 22nd Annual Winter Skeletal Symposium. Musculoskeletal MRI, Chateau Lake Louise, March 22-26, 1999

Committee member: Simplification of the BMD Report. National Osteoporosis Foundation Committee Meeting. Dallas, Texas, Feb 19, 1999.

Guest presenter: Assessment of osteoporotic fractures in the PROOF study. Miocalcic Expert Meeting. Sitges, Spain, Mar 5-7, 1999.

Chairperson: SS 610. European Congress of Radiology 1999. Vienna, Austria, Mar 7-12, 1999.

Committee member: TNF/MMP Clinical Development Plan. Novartis Arthritis Clinical Advisory Briefing. Miami, Florida, Mar 12-15, 1999.

Presenter: Radiographic Scale of Fracture Union: Training and Validation. RhBMP-2 Investigators Meeting for Pivotal Study C9530-11. Venice, Italy, Mar 19-20, 1999.

Chairperson and Guest Speaker: Non-invasive Bone Imaging. International Congress on Osteoporosis 1999. Xi'an, China, Mar 30-Apr 3, 1999.

Presenter: Bone density evaluation (DXA). Postmenopausal osteoporosis: today and tomorrow (state of the art and perspectives), Sienna, Italy, Apr 16-17, 1999.

Presenter: Evaluation of articular cartilage in patients with osteonecrosis with MRI. Osteonecrosis of the Hip Mini Course, Joint Replacement Institute, Los Angeles, Jun 25, 1999.

MRI in myeloproliferative disorders. The International Skeletal Society, 26th Annual Refresher Course, Seattle, Washington, Aug 15-22

Presenter: Osteoporosis Update. Joint Meeting of the 8th Refresher Course of the British Society of Skeletal Radiology & 6th Scientific Meeting of the European Society of Musculoskeletal Radiology, Edinburgh, Scotland, Oct 6-9, 1999

Noninvasive and/or Nondestructive Imaging of Bone Macro and Micro Structure. Lecture: Third International Conference on Osteoporosis. Xi'an, China Mar 28-Apr 2, 1999

Bone Densitometry with Dual X-ray Absorptiometry. Postmenopausal Osteoporosis: Today and Tomorrow (State of the Art and Perspective). Sienna, Italy. Apr 16-17, 1999

Advances in Musculoskeletal Imaging. American College of Rheumatology 1999 Spring Clinical Meeting. San Francisco, Apr 11, 1999.

Advanced Imaging of Bone and Macro and Micro Structure. X Symposium of the Polish Osteoarthrology Society and the Polish foundation of Osteoporosis Krakow, Sep 23-26, 1999.

International Faculty & Presenter: Osteoporosis: Advanced Assessment. Musculoskeletal Radiology and Breast Imaging, NICER China Program, Oct 18-21, 1999

Noninvasive and/or Nondestructive Imaging of Bone Macro and Micro Structure. Lecture: Third International Conference on Osteoporosis. Xi'an, China Mar 28-Apr 2, 1999

Bone Densitometry with Dual X-ray Absorptiometry. Postmenopausal Osteoporosis: Today and Tomorrow (State of the Art and Perspective). Sienna, Italy. Apr 16-17, 1999

Advances in Musculoskeletal Imaging. American College of Rheumatology 1999 Spring Clinical Meeting. San Francisco, Apr 11, 1999.

Advanced Imaging of Bone Macro and Micro Structure. 11th International Workshop on Calcified Tissues. Eilat, Israel Feb 7-12, 1999

2000

“Microarchitectural Assessment of Bone” and “Diagnostic Classification Using Bone Densitometry: Expanding Opportunities and Emerging Dilemmas”. International Bone & Hormone Meeting, Australia and New Zealand Bone and Mineral Society 10th Annual Scientific Meeting. Nov 4-7. Hamilton island, North Queensland, Australia

Plenary lectures “Advances in bone densitometry” and Noninvasive imaging of macro and micro structure of bone” First annual meeting of the Asociación Mexicana de Metabolismo Oseo Mineral. Jan 26-29. Huatulco, Mexico

Measurement of BMD - how different methods perform in a clinical setting (lecture) . Forum for Bone and Mineral Research, sponsored by Merck. Apr 1. Oslo, Norway.

Presentation: Scoring of rheumatoid arthritis on conventional radiographs and/or digitized images 9th APLAR Congress of Rheumatology, May 21-26. Beijing

Satellite symposium on “Osteoporosis : A call to action” Lecture on “Breakthroughs in fracture reduction with bisphosphonate therapy”. World Congress on Osteoporosis. Jun 15-18, Chicago

Satellite Symposium: Can novel therapies preserve greater function in rheumatoid arthritis patients? – Target IL-1 Inhibition. 64th Annual Meeting American College of Rheumatologists, Oct 28-Nov 2, Philadelphia

Diagnostic Assessment of Osteoporosis with Bone Mineral Densitometry. First International Seminar on Osteoporosis, Oct 16-19. Beijing

Satellite symposium “Clinical considerations in the selection of an osteoporosis therapy” Presentation: “Changing the Osteoporosis paradigm: Expectations for therapeutic benefits: 22nd Annual Meeting of the American Society for Bone and Mineral Research , Sep 22-26. Toronto.

Invited speaker: Satellite Symposium on Current Issues in Osteoporosis Assessment; at IV Congreso Argentino de Osteoporosis and II Congreso de Enfermedades del Metabolismo Oseo y Mineral del Mercosur. Aug 16-19. Buenos Aires

Invited speaker: “Macro and Micro Structure of bone” Symposium: PET: Status and Future, in honor of the opening of the Hopitaux Universitaires de Geneve PET Cyclotron center.

Session co-chair: Fracture studies and assessment of osteoporosis 14th International bone Densitometry Workshop Sep 3-8. Warnemünde, Germany

Session co chair: “The Scope of the Issue” Special focus Day at 14th International bone Densitometry Workshop Sep 3-8. Warnemünde, Germany

2001 “BMD: Optimizing Use in Osteoporosis Assessment” 21st Century Bone Health, a CME symposium. Apr 30, 2001. Chicago

Invited speaker: Bone Densitometry: Applications and Interpretations. II Congreso Latinoamericano/IX Congreso Chileno de Osteología y Metabolism Mineral. Apr 26-29. Santiago, Chile

Presentation: The Future of Bone Densitometry. International Society for Clinical Densitometry Annual Scientific meeting and Certification Course. Mar 13-17, Dallas Texas.

Presentation: Imaging of Vertebral Fractures. International Society for Clinical Densitometry Annual Scientific meeting and Certification Course. Mar 13-17, Dallas Texas.

Presentation: MR Imaging of bone marrow; M Imaging of arthritis. 9th international MRI Symposium. Jan 24-27. Garmisch-Partenkirchen

Moderator: Musculoskeletal Session. 9th International MRI Symposium. Jan 24-27. Garmisch-Partenkirchen

CONTINUING EDUCATION COURSES AND POSTGRADUATE COURSES

- 1975** Primary hyperparathyroidism. 18th Annual Postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar 1975.
- 1976** Clinical impact of magnification of skeletal radiology. 19th Annual Postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar 15-19, 1976.
- 1977** The HLA B27 associated arthritis. 20th Annual Postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar, 1977.
Direct radiographic magnification in skeletal radiology. Symposium on Micro focal Spot Magnification Radiology. Sponsored by Georgetown University School of Medicine Office of Continuing Education and Department of Radiology, Arlington, Virginia, Dec 7, 1977.
- 1978** Articular calcifications. 21st Annual postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar 6-10, 1978.
Magnification techniques in bone and joint disease and Role of CAT scanning. Postgraduate Course, Radiology and Bones and Joints. Sponsored by the Columbia University College of Physicians Surgeons. New York, Oct 17, 1978.
- 1979** The radiographic characteristics of arthritis in the hands. 22nd Annual postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar 12-16, 1979.
Common arthritic manifestations in the hips and knees. Emergency Room Course, University of California, San Francisco Jun 18-20, 1979.
CT of the musculoskeletal disorder, HLA B27 associated spondyloarthritis and newer radiographic techniques in metabolic bone disease. Orthopaedic Radiology, Harvard Medical School 4th Annual Postgraduate education Course. Cambridge, Massachusetts, Oct 25-28, 1979.
- 1980** Quantitative computed tomography for bone mineral analysis. Interventional Radiologic Techniques: Computed Tomography and Ultrasonography Course, University of California San Francisco, Jan 28 -Feb 1, 1980.
Reflex sympathetic dystrophy. 23rd Annual Postgraduate Course in Diagnostic Radiology, University of California San Francisco, Mar 3-7, 1980.
- 1981** CT of disc disease. Interventional Radiologic Techniques: Computed tomography and Ultrasonography Course, University of California San Francisco, Jan 19-23, 1981.
Radiology of osteoscleroses. Radiology Grand Rounds, University of California, San Francisco, Feb 26, 1981.
Radiology of osteoscleroses. 24th Annual Postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar 9-13, 1981.
Program Director. CT of the lumbar spine: Technical Considerations. CT of the Lumbar Spine Course, Department of Radiology, University of California, San Francisco, Oct 22-23, 1981.
- 1982** Advanced applications in musculoskeletal CT. Interventional Radiology and Diagnostic Imaging Modalities, University of California San Francisco, Jan 25-29, 1982.

Radiography of osteopenia. 25th Annual Postgraduate Course in Diagnostic Radiology, University of California San Francisco, Mar 15-19, 1982.

Program Director. CT of the lumbar spine: Technical Considerations. CT of the Lumbar Spine Course, University of California San Francisco, Apr 30-May 1, 1982.

Program Director. CT of the lumbar spine: Technical Considerations and NMR: Principles and prospects for the spine. CT of the Lumbar spine Course, University of California San Francisco, Oct 7-9, 1982.

1983 Nuclear magnetic resonance imaging of the musculoskeletal system. NMR, Interventional Radiology and Diagnostic Imaging Modalities Course, University of California, San Francisco, Jan 17-21, 1983.

Clinical impact of quantitative computed tomography for vertebral mineral assessment. 26th Annual Postgraduate Course in Diagnostic Radiology, University of California San Francisco, Mar 14-18, 1983.

Nuclear magnetic resonance and Bone mineralization, University of Irvine Postgraduate Course in Diagnostic Radiology, Anaheim, California, Jun 13-16, 1983.

NMR of the spine. Advances in Organ Imaging and Contrast Enhancement, Radiology Postgraduate Course, University of California San Francisco, Oct 20-21, 1983.

Program Director. Spine Update 1983 Course, Postgraduate Radiology Course, University of California, San Francisco, Oct 31-Nov 2, 1983.

1984 NMR imaging of the musculoskeletal system. NMR, CT and Interventional Radiology, Radiology Postgraduate Course, University of California San Francisco, Jan 9-14, 1984.

Musculoskeletal NMR. Diagnostic Radiology Seminars. Radiology Postgraduate Course, University of California, Ixtapa, Mexico, Feb 20-24, 1984.

Computed tomography in musculoskeletal trauma. 27th Annual Postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Mar 11-16, 1984.

NMR in the musculoskeletal system. 1984 Advances in Internal Medicine, Department of Medicine, University of California, San Francisco, CA, Jun 19, 1984.

NMR in the musculoskeletal system. Rheumatology, Allergy and Clinical Immunology: An Advanced Course, Department of Medicine, University of California San Francisco, Oct 15-18, 1984.

Advances in CT of the musculoskeletal system and NME of the musculoskeletal system. Orthopaedic Radiology, 1984, Harvard Medical School, Boston, Oct 15-18, 1984.

Program Chairman. Musculoskeletal MRI. Spine Update 1984, University of California San Francisco, Oct 24 -26, 1984.

Advances in the diagnosis of osteoporosis. Department of Orthopaedic Surgery, University of California San Francisco, Oct 23, 1984.

Radiology of metabolic bone disease including advances in the diagnosis of osteoporosis. Department of Orthopaedic Surgery, Sep 4, 1984.

- 1985** CT of the spine. MRI, CT and Interventional Radiology, University of California San Francisco, Jan 7-11, 1985.
Low back pain syndrome; Meet the Professor; MRI of the spine. Diagnostic Radiology Seminars, University of California San Francisco, Ixtapa, Mexico, Jan 14-18, 1985.
MRI of skeletal diseases. 28th Annual postgraduate course Diagnostic Radiology, University of California San Francisco, Mar 11-15, 1985.
- 1986** MRI of spine. Interventional, MRI and Neuroradiology, University of California San Francisco, Jan 13-17, 1986.
The Walter Herbert memorial Lecture: Osteoporosis: Current Status. 29th Annual Postgraduate course in Diagnostic Radiology, San Francisco, Mar 24-28, 1986.
Bone density assessment: CT scanning versus DPA. Continuing Medical Program, Shawnee Mission Medical Center, Kansas City, Kansas, Mar 28, 1986.
Magnetic resonance imaging of the musculoskeletal neoplasms. 6th Annual Current Approaches to Radiation Oncology, Biology and Physics, University of California San Francisco, Mar 26-28, 1986.
Osteoporosis. UCLA Medical Center, Los Angeles, Apr 9, 1986.
Assessment of osteoporosis. Present Concepts in Diagnostic Radiology, Letterman Army Medical Center, Presidio of San Francisco, May 20-23, 1986.
MRI and Musculoskeletal disease and Osteoporosis. Interurban Orthopaedic Society, San Francisco, Oct 2, 1986.
Magnetic resonance imaging in musculoskeletal disorders. Rheumatology and Clinical immunology, Department of Medicine, Oct 7-10, 1986.
The new technologies in musculoskeletal imaging. The Fourth International Meeting, The Impact of New Imaging Technology on Health Care, Research, and Teaching, Oct 23-25, 1986.
- 1987** MRI of the spine. The 30th Annual Postgraduate Radiology Course, Department of Radiology, University of California San Francisco, Mar 9-13, 1987.
Morning session overview with the Professor, MRI of the musculoskeletal system, MRI of the lumbar spine and Radiology of osteosclerosis. UCSF Diagnostic Imaging 1987: Multimodality Radiology Relevant to Clinical Practice, Kauai, Hawaii, Mar 16-20, 1987.
Course Director: Osteoporosis Update 1987, University of California, Hyatt Union Square, San Francisco, May 4-6, 1987.
Course Director: Spine Update 1987, University of California, Hyatt Union Square, San Francisco, May 6-8, 1987.
Bone Imaging in Orthopaedics. University of California San Francisco Orthopaedic Review Course 1987, San Francisco, May 9-15, 1987.
MRI of the spine: Techniques and Results. University of California LeRoy C. Abbott Society meeting, Department of Orthopaedics, San Francisco, May 22, 1987.

Radiology of Osteosclerosis. Summer Grand Rounds, Department of Radiology, University of California, Aug 6, 1987.

MRI of the spine. Clinical Magnetic Resonance Imaging, University of California, San Francisco, Oct 19-23, 1987.

MRI in musculoskeletal system. Clinical Magnetic Resonance Imaging, University of California, San Francisco, Oct 23, 1987

Controversies surrounding osteoporosis, Current assessment of osteoporosis and MRI of the knee. Diagnostic Radiology Seminars, Department of Radiology, University of California, Maui, Hawaii, Nov 2-6, 1987.

1988 MRI of the spine, MRI of the Joint, MRI of musculoskeletal neoplasms, Osteoporosis Current assessment. Diagnostic Radiology Seminars, UCSF, Aspen, Colorado, Feb 14-19, 1988.

MRI of the lumbar spine. 31st Annual Postgraduate Course Diagnostic Radiology, UCSF, San Francisco, Mar 21-25, 1988.

MRI in failed back syndrome. Clinical Magnetic Resonance Imaging Postgraduate Course, UCSF, San Francisco, Oct 24-28, 1988.

Osteoporosis: Assessment by bone densitometry. CT and MRI Head to Toe. New York University Medical Center postgraduate Course, New York, Dec 12-17, 1988.

1989 Appropriate application of bone densitometry. 32nd Annual Postgraduate Diagnostic Radiology Course, UCSF, San Francisco, Mar 13-17, 1989.

Bone imaging in orthopaedics. The San Francisco Orthopaedic Review Course 1989, Extended Programs in Medical Education , University of California, San Francisco, Golden Gateway Holiday Inn, San Francisco, May 22-26, 1989.

Program Chairman: MRI of lumbar disc disease, MR of the post op spine Musculoskeletal Magnetic Resonance Imaging, University of California, San Francisco, Hyatt Regency Embarcadero, Jul 12-14, 1989.

Course Director: MRI of shoulder and MRI in the failed back surgery syndrome. Clinical Magnetic Resonance Imaging, Hyatt Regency, San Francisco, University of California, San Francisco, Oct 7, 1989.

1990 Rheumatoid arthritis. Rheumatology Conference, University of California, San Francisco, Jan 23, 1990.

Arthritis. Resident Review/Diagnostic Imaging Course, University of California, San Francisco, Marriott Hotel, Mar 1-4, 1990.

MRI of the Shoulder. Thirty Third Annual Postgraduate Course in Diagnostic Radiology, University of California, San Francisco, Fairmont Hotel, Mar 19-23, 1990.

Osteoporosis and Bone Densitometry Studies. Oral and Maxillofacial Surgery Grand Rounds, School of Dentistry, University of California, San Francisco, Apr 17, 1990.

1991 Lumbar spine disc disease, MR of failed back surgery, MR of shoulder. Neuro and Musculoskeletal MR Applications, University of California, San Francisco, Kauai, Hawaii, Jan 13-18, 1991.

MR in arthritis. Department of Rheumatology, University of California, San Francisco, Jan 26, 1991.

The failed back, The shoulder, Department of Radiology, University of California, San Francisco, Rancho Mirage, California, Feb 4-8, 1991.

MR in arthritis, Metabolic bone disease. Resident's Review Course, Department of Radiology, Airport Hyatt Regency, University of California, San Francisco, Mar 4 -8, 1991.

MRI of the Shoulder. 34th Annual Diagnostic Radiology Postgraduate Course, Fairmont Hotel, San Francisco, Mar 18-22, 1991.

MRI of failed back and MRI of arthritis. Clinical Magnetic Resonance Imaging, University of California, San Francisco, Oct 21-25, 1993.

Detection of osteoporosis. The bone mineral density measurements. What is it? How and when to use it. Osteoporosis Update for Primary Care Physician, Institute on Aging, Mt. Zion Medical Center, University of California, San Francisco, Nov 16, 1991.

1992 MRI of arthritis, & MR of shoulder. Advances in Neuro and Musculoskeletal MRI, University of California, San Francisco, Ritz Carlton, Mauna Lani, Hawaii, Jan 26-31, 1992.

MRI of Shoulder, MRI of post op spine & MRI of arthropathies. Magnetic resonance imaging in the Desert, University of California, San Francisco, Ritz Carlton, Rancho Mirage, California, Feb 3-7, 1992.

Arthritis and Metabolic. Resident Review Course: Diagnostic Imaging course. Hyatt Regency Hotel, Burlingame, California, Mar 2-6, 1992.

MR of Bone Marrow, MRI of Failed Back, MRI of Shoulder I & II. Magnetic Resonance Imaging: Update 1992, Winter Conference, Vail, Colorado, Mar 8-13, 1992.

MRI of Bone Marrow. 35th Annual Diagnostic Radiology Postgraduate Course, Fairmont Hotel, San Francisco, Mar 23-27, 1992.

Clinical use of bone mass measurement. Clinical Management of the Patient with Osteoporosis. Sponsored by the National Osteoporosis Foundation, San Francisco, May 15-16, 1992.

Postmenopausal osteoporosis. Hormone Replacement 1992L New Attitudes. East Bay Institute for Research & Education, Inc. Veterans Affairs Medical Center, University of California, San Francisco, School of Pharmacy, San Francisco, CA, May 16-17, 1992.

MRI of Bone Marrow, MRI of Shoulder, Part I & II, MRI of Failed Back, MRI of Arthritis. Neuro and Musculoskeletal MRI Summer in Aspen, University of California, San Francisco, Aspen, Colorado, Jul 13-17, 1992.

MRI of Shoulder I & II, MRI of Marrow I & II, MRI of Failed Back. 1992 MRI: Musculoskeletal Body, University of California, San Francisco, Mauna Lani Bay, Kona, Hawaii, Jul 26-31, 1992.

MRI of Shoulder, MRI of post op spine. Clinical Magnetic Resonance Imaging, University of California, San Francisco, Hyatt Regency, San Francisco, Oct 19-23, 1992.

1993 MRI of failed back, MRI of Shoulder, MRI of bone marrow. Neuro & Musculoskeletal MRI Applications, University of California, San Francisco, Kauai, Hawaii, Jan 10-15, 1993.

Osteoporosis: Current Assessment, MRI of Shoulder, MRI of failed back syndrome.
Diagnostic Imaging Update: 1993, University of California, San Francisco, Park City, Utah,
Feb 14-19, 1993.

Arthritis and Metabolic. Resident's Review: Diagnostic Imaging Course, University of
California, San Francisco, Mar 1-5, 1993.

Osteoporosis: Current Assessment. 36th Annual Diagnostic Radiology Postgraduate Course,
University of California, San Francisco, Fairmont Hotel, San Francisco, Mar 22-26, 1993.

MRI of shoulder and MRI of Bone Marrow. Practical Body Imaging: CT, US, and MRI in
the 1990's, University of California, Marriott Hotel, Monterey, California, May 24-28, 1993.

MRI of arthritis, MRI of shoulder: Impingement & Instability. MRI Update in Aspen:
Musculoskeletal/Neuroradiology, University of California, San Francisco, Ritz Carlton
Hotel, Aspen, Colorado, Jul 19-23, 1993.

Course Director: MRI of bone marrow. Clinical Magnetic Resonance Imaging, Postgraduate
Course, University of California, San Francisco Oct 18-22, 1993.

MRI of bone marrow, MRI of arthritis, MRI of shoulder: Impingement syndrome, MRI of
shoulder: Instability, Diagnostic Radiology Seminars, UCSF Postgraduate Course, Maui,
Hawaii, Nov 1-5, 1993.

1994 MRI of arthritis, Musculoskeletal Radiology. 37th Annual Diagnostic Radiology Course,
University of California, San Francisco, Mar 21-25, 1994.

MRI of failed back and MRI of arthritis. Clinical Magnetic Resonance Imaging, University
of California, San Francisco, Oct 3-7, 1994.

Bone Marrow, Lumbar degenerative disc disease, post operative lumbar spine. Postgraduate
Course on CT and MRI, New York University Medical Center, New York, Dec 12-17, 1994.

1995 Guest Lecturer: Current and advanced imaging techniques for arthritis. Sponsored by the
Division of Rheumatology of the Albert Einstein College of Medicine and Montefiore
Medical Center Office of Continuing medical Education, Seattle, Washington, Mar 19, 1995.

MRI of bone marrow, MR of shoulder, Part I and II, MR of the lumbar spine. MR Update in
Aspen: Musculoskeletal/Neuroradiology, Aspen, Colorado, Jul 10-14, 1995.

Tenidap slows x ray deterioration in rheumatoid arthritis. American College of
Rheumatology, San Francisco, Oct 21-26, 1995.

Rheumatoid Arthritis: Current advances in Pathogenesis, Diagnosis and Management, Albert
Einstein College of Medicine and Montefiore Medical Center, San Francisco, Oct 26, 1995.

MRI of lumbar spine, MRI of shoulder, MRI of arthritis, MRI of bone marrow, Part I & II,
Diagnostic Radiology Seminars, Kapalua, Hawaii, Oct 30-Nov 3, 1995.

1996 Course Director: First International Symposium. Musculoskeletal magnetic resonance
imaging, San Francisco, Jan 22-25, 1996.

MR arthritis, MR of spine, MR shoulder Part I & II. Neuro and Musculoskeletal MR imaging
Course, Kapalua, Hawaii, Feb 18-23, 1996.

MRI shoulder, MRI postoperative spine, MR of bone marrow. 19th annual winter skeletal symposium: Musculoskeletal MRI in Telluride, Continuing Medical Education, University of Pennsylvania School of Medicine, Telluride, Colorado, Mar 11-15, 1996.

Hip MRI. 1996 Orthopaedic Radiology with emphasis on MRI Postgraduate course, Harvard Medical School Continuing Medical Education, Boston, Mar 20-22, 1996.

Moderator: 39th Annual Diagnostic Radiology Postgraduate Course, University of California, San Francisco, Mar 25-29, 1996.

MR of bone marrow. Neuro and Musculoskeletal MR Imaging. University of California San Francisco. Aspen, Colorado Jul 8-12, 1996.

MRI of marrow disorders, Shoulder MRI impingement and rotator cuff tears, MRI of the post operative spine. 2nd Summer Skeletal Symposium on Musculoskeletal MRI, University of Pennsylvania Medical Center, Continuing Medical Education, Department of Radiology, Banff, Canada, Jul 21-26, 1996.

Radiographic diagnosis of osteoporosis and osteoarthritis. Deaconess Research Institute Workshop on Osteoporosis: Interrelationship with Osteoarthritis, Billings, Montana, Aug 25-28, 1996.

Interpretation of bone densitometry. Bone Disease for the Rheumatologist: Osteoporosis, New Management Strategies, and Beyond. Veterans Affairs Medical Center, University of Pennsylvania School of Medicine, Philadelphia, Sep 19-21, 1996.

Session moderator: Musculoskeletal MRI. Clinical MRI Course, sponsored by University of California, San Francisco. San Francisco, Oct 7-11, 1996.

Shoulder MR; Interesting cases: musculoskeletal (two sessions): musculoskeletal. Harvard Medical School, Department of Continuing Education, Brigham and Women's Hospital, Department of Radiology: 1996 MRI/CT Update: Body Imaging Neuroimaging. Cambridge, Massachusetts, Oct 21-25, 1996.

Osteoporosis Update: diagnostic methods, applications, and economics. Refresher course at the Radiological Society of North America Annual Meeting, Chicago, Dec 1-5, 1996.

Shoulder; Lumbar degenerative disk disease; Postoperative spine imaging. 15th Annual CT/MRI Head to Toe. New York Medical Center, New York, New York.

1997

MRI of the spine, Osteoporosis Update, MRI of Bone Marrow. Current Concepts in Neuro and Musculoskeletal Imaging. The Orchid at Mauna Lani, Kona Hawaii, Feb 16-21, 1997.

Bone mass evaluation (refresher course). European Congress of Radiology, Mar 2-7, 1997. Vienna, Austria

Shoulder MRI Rotator Cuff Abnormalities and Instability, MRI of the postoperative spine, MRI of marrow disorder. 20th Annual Winter Skeletal Symposium Musculoskeletal MRI, University of Pennsylvania Medical Center, Crested Butte, Colorado, Mar 10-14, 1997.

Moderator of Musculoskeletal Radiology session. 40th Annual Diagnostic Radiology Postgraduate. University of California San Francisco, Fairmont Hotel, San Francisco, Mar 17-21, 1997.

Cost effectiveness of dedicated extremity MRI in suspected scaphoid fractures. (Senior author) Second International Symposium on Musculoskeletal MRI, University of California San Francisco, June 1-5, 1997

MRI of pediatric hip disorders. (Co author). Second International Symposium on Musculoskeletal MRI, University of California San Francisco, June 1-5, 1997

Magnetic resonance imaging of the bone marrow. Second International Symposium on Musculoskeletal MRI, University of California San Francisco, June 1-5, 1997

Techniques of MR Imaging of Articular Cartilage. Presentation at refresher course, ISS meeting, Santa Fe, New Mexico, Sep 10-13, 1997.

MRI: new sequences, new coils; Dedicated MRI: what is the future?; Spiral CT in musculoskeletal disease: Bone Densitometry: where is it going? Refresher course on new technical developments. 4th annual meeting, European Society of Musculoskeletal Radiology, Venice, Oct 10-11, 1997

Moderator: Musculoskeletal imaging. Clinical Magnetic Resonance Imaging Course San Francisco, Oct 6-10, 1997

Moderator, Skeletal Imaging: An update 13th Carvat, 25th anniversary: Silver Jubilee Rome Oct 12-15, 1997

1998 Osteoporosis update, MRI of the spine, MRI in arthritis. Current Concepts in Neuro and Musculoskeletal Imaging. Kona, Hawaii, Feb 15-20, 1998.

MRI of the Shoulder: Part I and II; MRI of Bone Marrow: Part I and II; Osteoporosis. Diagnostic Imaging in Kona. Kona, Hawaii, Apr 19-24, 1998

Osteoporosis Update; Panel Moderator. UCSF Radiology Postgraduate Education. San Francisco May 27-30, 1998

MRI of Bone Marrow; MRI in Arthritis; MRI of the Shoulder. Diagnostic Radiology Seminars. UCSF Radiology Postgraduate Education. Maui, Hawaii. Oct 25-30, 1998

MRI of the Bone Marrow: Clinical MRI. UCSF Radiology Postgraduate Education. San Francisco, Oct 19-23, 1998

Osteoporosis Update, MRI of the Spine, MRI in Arthritis. Current Concepts in Neuro and Musculoskeletal Imaging. Kona, Hawaii, Feb 15-20, 1998.

1999 MRI of the Post Op Spine; MRI of the Shoulder. 22nd Annual Winter Skeletal Symposium Musculoskeletal MRI, University of Pennsylvania Medical Center. Lake Louise, Alberta. Mar 22-26, 1999

Participating Faculty, Moderator and Presenter: Fourth Day Case Review - Spine, MRI of the Post-Spine, 22nd Annual Winter Skeletal Symposium. Musculoskeletal MRI, Chateau Lake Louise, March 22-26, 1999

Presenter and Moderator: Shoulder MRI-Impingement and Rotator Cuff Tears, MRI of Musculoskeletal, MRI of Bone Tumors. 4th Annual Summer Musculoskeletal MRI meeting, Interlaken, Switzerland, July 19-23, 1999

MRI of bone marrow. Clinical MRI. UCSF Radiology Postgraduate Education. San Francisco, Oct 4-8, 1999

- 2000** MRI of the Shoulder; MRI in Arthritis; Shoulder Impingement and Rotator Cuff Abnormalities. 23rd Annual Winter Skeletal Symposium Musculoskeletal MRI Mar 13-17. Sun Valley, Idaho.
Impingement and Rotator Cuff Repairs; MRI of Marrow disorders; MRI of the Post-Operative Spine. Fifth Summer Skeletal Symposium: Musculoskeletal MRI. Jul 31-Aug 4. Banff, Canada.
- 2001** Osteoporosis; MRI of Bone Marrow. Diagnostic Imaging in Costa Rica. UCSF Radiology Postgraduate Education. Jan 7-12. San Jose, Costa Rica.
MR of Rotator Cuff Abnormalities; MR of Bone Marrow. Musculoskeletal MRI, 24th Annual Winter Skeletal Symposium. Mar 12-16. Sun Valley, Idaho.

CHAPTERS IN BOOKS AND INVITED ARTICLES

- 1973** Genant HK, Doi K, Rossmann K, Williams JR: Fine-detail radiography: Theoretical and practical considerations. In, Proceedings of the First International Workshop on Bone Morphometry. Jawarsky A. (ed), University of Ottawa, Canada, 1973, pp 63-69.
- Genant HK, Vander Horst J, Lanzl LH, Mall JC, Doi K: Skeletal demineralization in primary hyperparathyroidism. In, International Conference on Bone Mineral Measurement, Mazess RB (ed). National Institute of Arthritis, Metabolism and Digestive Diseases (DHEW Publication No. 75-683 (NIH), 1973.
- 1975** Genant HK: Primary hyperparathyroidism. In, Diagnostic Radiology. Margulis AR, Gooding CA (eds). 18th Annual postgraduate course in Radiology, University of California, San Francisco, 1975, pp 360-386.
- 1977** Genant HK: The HLA-B27 arthritis. In, Diagnostic Radiology. Margulis AR, Gooding CA (eds). 20th Annual postgraduate course in Radiology, University of California, San Francisco, 1977, pp 353-376.
- Genant HK, Doi K: Fine-detail skeletal radiography in bone tumors. In, Encyclopedia of Medical Radiology—Bone Tumors, Ranninger K (ed), Vol. 6, Springer-Verlag, Berlin, Heidelberg, New York, 1977.
- 1978** Baumrind S, Genant HK, Hunter JC, Miller D, Moffitt E, Murray WR, Ross SE: A stereophotogrammetric system for the detection of prosthesis loosening in total hip arthroplasty. Proceedings of the Society of Photo-Optical Instrumentation Engineers. Applications of Human Biostereometrics (NATO), 1978, 166:112-123.
- Genant HK: Assessment of musculoskeletal disorders by computed tomography. In, Computed Tomography Ultrasound and X-ray: An Integrated Approach. Korobkin MT (ed), University of California San Francisco, 1978, pp 529-543.
- Genant HK: Musculoskeletal applications of computed tomography. In, Radiology, Pathology, and Immunology of Bones and Joints: A review of current concepts. Feldman F (ed), Appleton-Century-Crofts, New York, 1978, pp 253-256.
- Genant HK: Clinical applications of magnification in skeletal radiology. I In, Radiology, Pathology, and Immunology of Bones and Joints: A review of current concepts. Feldman F (ed), Appleton-Century-Crofts, New York, 1978, pp 133-138.
- Genant HK: Pseudogout and other calcifying disorders of joints. In, Diagnostic Radiology. Margulis AR and Gooding CA (eds), 21st Annual Postgraduate Course in Diagnostic Radiology, University of California San Francisco, 1978, pp 529-543.
- Genant HK: Quantitative bone mineral analysis using computed tomography. In, Radiology, Pathology, and Immunology of Bones and Joints: A review of current concepts. Feldman F (ed), Appleton-Century-Crofts, New York, 1978, pp 183-188.
- 1979** Genant HK: Radiology of rheumatic diseases. In, Arthritis and Allied Diseases, McCarty DJ (ed), 9th Edition, Philadelphia, Lea and Febiger, 1978, pp 70-130.
- 1980** Abols Y, Genant HK, Rosenfeld D, Boyd DP, Ettinger B, Gordan GS: Spinal bone mineral determination using computerized tomography in patients, controls and phantoms. In, Mazess RB (ed) 4th International Conference on Bone Measurement, Jun 1-3, 1978,

University of Toronto, Ontario, Canada, US Government Printing Office, Washington, DC. , 1980, 297-308, DHEW publication No. 80-1938 (NIH), 1980.

Genant HK: Disuse Osteoporosis. In, American College of Radiology Bone Disease Syllabus III, Theros EG, Harris JH (eds), Chicago, Ill. , 1980, pp 486- 507.

Genant HK: Juvenile Rheumatoid Arthritis. In, American College of Radiology Bone Disease Syllabus III, Theros EG, Harris JH (eds), Chicago, 1980, pp 160-173.

Genant HK: Reflex sympathetic dystrophy. In, Diagnostic Radiology, Margulis AR, Gooding CA (eds). 23rd Annual Postgraduate Course in Diagnostic Radiology, University of California San Francisco, 1980, pp 557-570.

Rosenfeld D, Genant HK, Abols Y, Boyd DP: Analysis of multiple energy computed tomography techniques for the measurement of bone mineral content. In, Mazess RB (ed), 4th International Conference on Bone Measurement, Jun 1-3, 1978, University of Toronto, Ontario, Canada, US Government Printing Office, Washington, DC, 1980, 284-296, DHEW publication No. 80-1938 (NIH).

1981

Genant HK, Chafetz NI, Dorwart RH, Helms CA: Computed tomography of the lumbar spine. In, Interventional Radiologic Techniques: Computed Tomography and Ultrasonography, Moss AA, Goldberg HI (eds), University of California Printing Department, 1981, pp 133-139.

Genant HK: Review of the Osteoscleroses. In, Diagnostic Radiology, Margulis AR, Gooding CA (eds). 24th Annual Postgraduate Course in Diagnostic Radiology, University of California San Francisco, 1981, pp 102-122.

Genant HK: Magnification radiography. In, Diagnosis of Bone and Joint Disorders, Resnick D, Niwayama G (eds), WB Saunders, Philadelphia & London, 1981, pp 320-345.

Genant HK: Xeroradiography. In, Diagnosis of Bone and Joint Disorders, Resnick D, Niwayama G (eds), WB Saunders, Philadelphia & London, 1981, pp 374-379.

Genant HK: Computed tomography of the musculoskeletal system. In, Diagnosis of Bone and Joint Disorders, Resnick D, Niwayama G (eds), WB Saunders, Philadelphia & London, 1981, pp 380-408.

Genant HK: Quantitative bone mineral analysis. In, Diagnosis of Bone and Joint Disorders, Resnick D, Niwayama G (eds), WB Saunders, Philadelphia & London, 1981, pp 679-691.

Genant HK, Boyd DP, Rosenfeld D, Abols Y, Cann CE: Quantitative bone mineral analysis using computed tomography. In, Noninvasive Measurements of Bone Mass and Their Clinical Applications, Cohen SH (ed), CRC Press, Inc. New York, 1981, pp 121-149.

Genant HK, Cann CE: Vertebral mineral determination using quantitative computer tomography. In, Osteoporosis: Recent advances in Pathogenesis and Treatment, Deluca HF, Frost HM, Jee WSS, Johnston CC, Parfitt AM (eds), University Park Press, Baltimore, 1981, pp 37-47.

Genant HK, Cann CE: Quantitative computed tomography for assessing vertebral bone mineral. In, Noninvasive Bone Measurements: Methodological Problems Radiogrammetry, Single and Dual Photon Absorptiometry, Neutron Activation and CT Densitometry. Dequeker JC, Johnston CC, Jr (eds), 1981, pp 215-249.

- 1982**
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- Chafetz NI, Genant HK: Computed tomography of the lumbar spine: Technique, anatomy, and interpretation. In, Interventional Radiology and Diagnostic Imaging Modalities, Goldberg HI (ed), University of California Printing Department, 1982, pp 131-142.
- Chafetz NI, Rodrigo JJ, Genant HK, Murray WR: Evaluation of the patient with painful prosthetic joint: radiography, arthrography, and nuclear medicine. In, Diagnostic Radiology, Margulis AR, Gooding CA (eds), 25th Annual Diagnostic Radiology Postgraduate Course, University of California San Francisco, 1982, pp 329-338.
- Genant HK, Cann CE: Quantitative computed tomography for assessing vertebral bone mineral. In, Proceedings Computed Tomography of the Lumbar Spine: Diagnostic and Therapeutic Implications for the Radiologist, Orthopedist, and Neurosurgeon. Genant HK, Chafetz NI, Helms CA (eds), University of California San Francisco, 1982, pp 289-314.
- Genant HK, Faul DD, Helms CA, Chafetz NI, Cann CE: Advances in computed tomography of the musculoskeletal system. In, Interventional Radiology and Diagnostic Imaging Modalities, Goldberg HI (ed), University of California Printing Department, 1982, pp 163-173.
- Genant HK: Advances in computed tomography of the musculoskeletal system. In, Clinical Trends in Orthopaedics, Straub LR, Wilson PD (eds), Thieme-Stratton, Inc., New York, 1982, pp 60-73.
- Genant HK: Computed tomography of the lumbar spine: Technical Considerations. In, Proceedings Computed Tomography of the Lumbar Spine: Diagnostic and Therapeutic Implications for the Radiologist, Orthopedist, and Neurosurgeon. Genant HK, Chafetz NI, Helms CA (eds). University of California San Francisco, 1982, pp 23-52.
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- Genant HK: Quantitative computerized tomography for spinal bone mineral analysis. In, Proceedings Radiology of Problems in Clinical Medicine, Reid MH (ed), 1982, pp 99-114.
- Genant HK: Radiography of osteopenia. In, Diagnostic Radiology Margulis AR, Gooding CA (eds), 25th Annual Diagnostic Radiology Postgraduate Course, University of California of San Francisco, 1982, pp 295-303.
- 1983**
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- 1984**
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